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THE NATIONAL GEOGRAPHIC MAGAZINE

JANUARY, 1912

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National Geographic Society

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Rabat Dar el Beida Mequinez FEZ Tlemsen Oran Mostaganem Arzew Mazagan Mogador Saffi Mogador Tangier Tetuan Ceuta Melilla

Plateau of the Shotts Jeb el Akhdar Mountains Mtugi High Atlas Mountains Anti Atlas Mountains Oasis Tafilet Oasis Tasim Tamagrut Figuig Mogar Geryville Bu Sada Chardaia El Golea El Meksa El Metlaf El Erg (Region of Sand) Habilat Ouargla

Mogador Agadir Mazagan Saffi Rabat Tangier Tetuan Ceuta Melilla Oran Mostaganem Arzew Algiers Bona Bougie Philippeville

Tenduf Sukkha Hammada Ain Berba IGIDI OR GIDI DESERT Mayara Sbiba El Hariz Tabelbalet Sheffana Sneiana Mezzeter Igli Tuat Touat Adghar Ain Salah Oasis Sali Timmimoun Tedemait Plateau

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Cephalonia
Zakynthos
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Malta to Constantinople 594
Marseilles to Naples 465
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XUM

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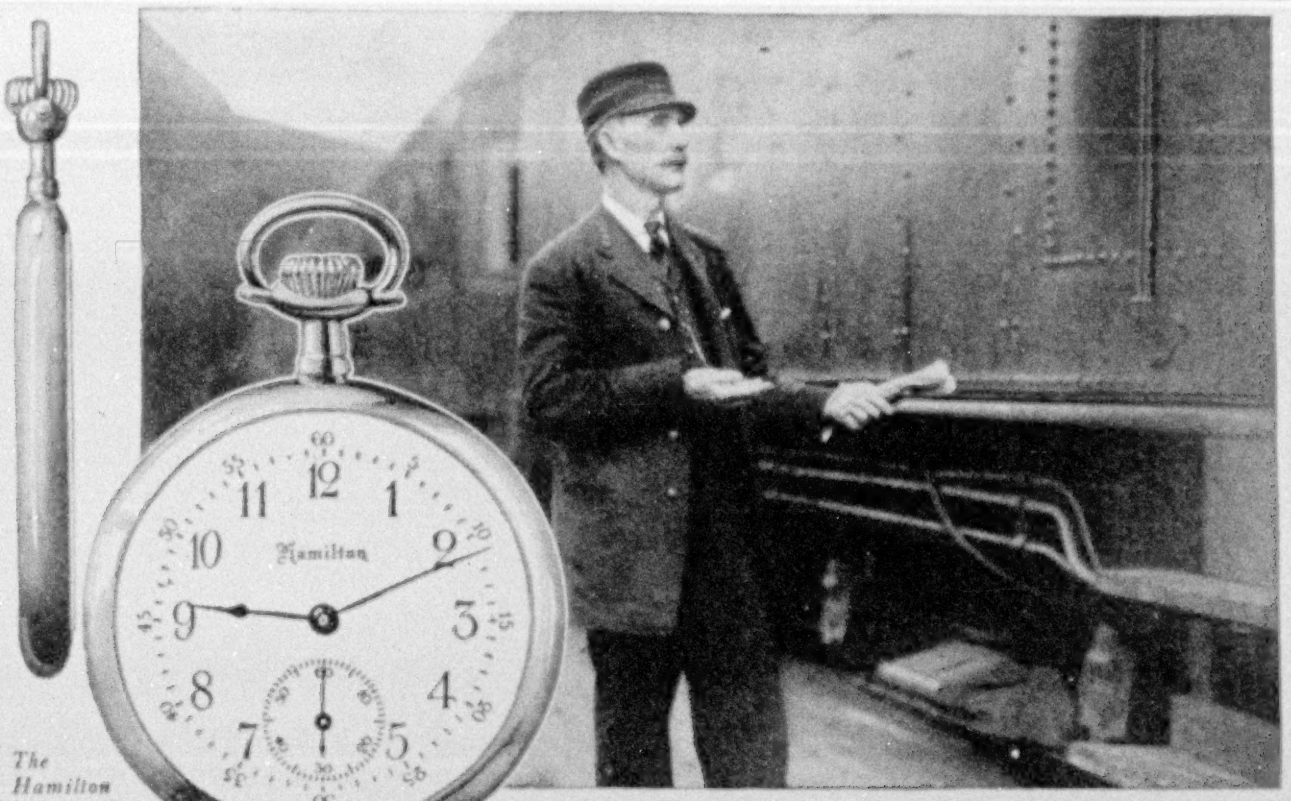

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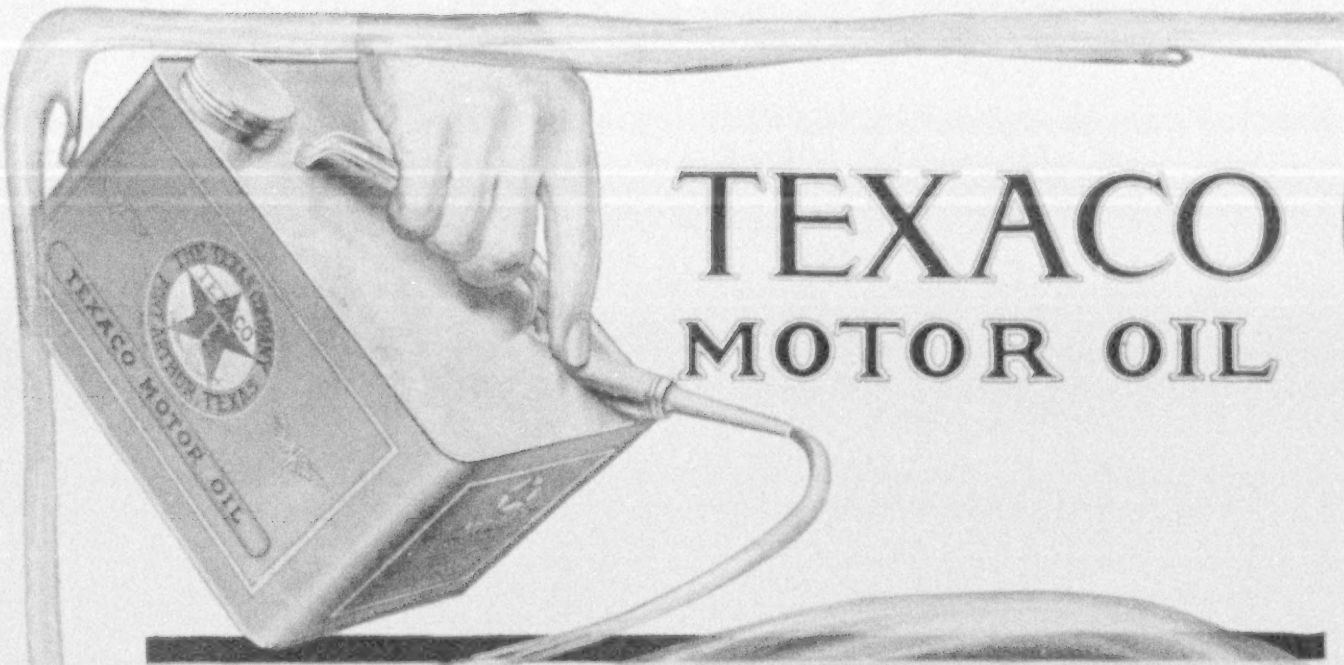

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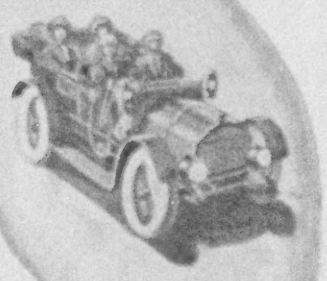

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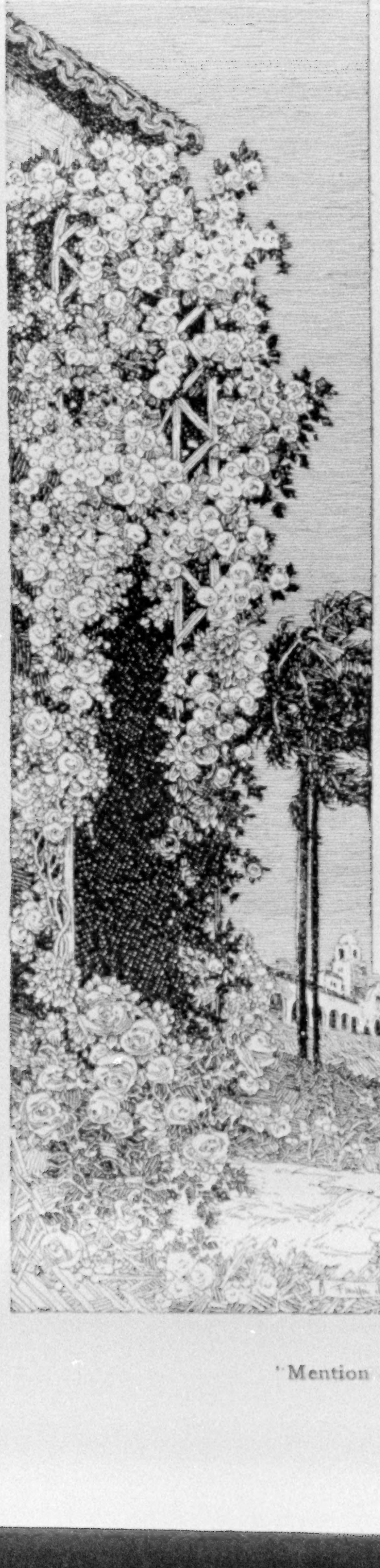

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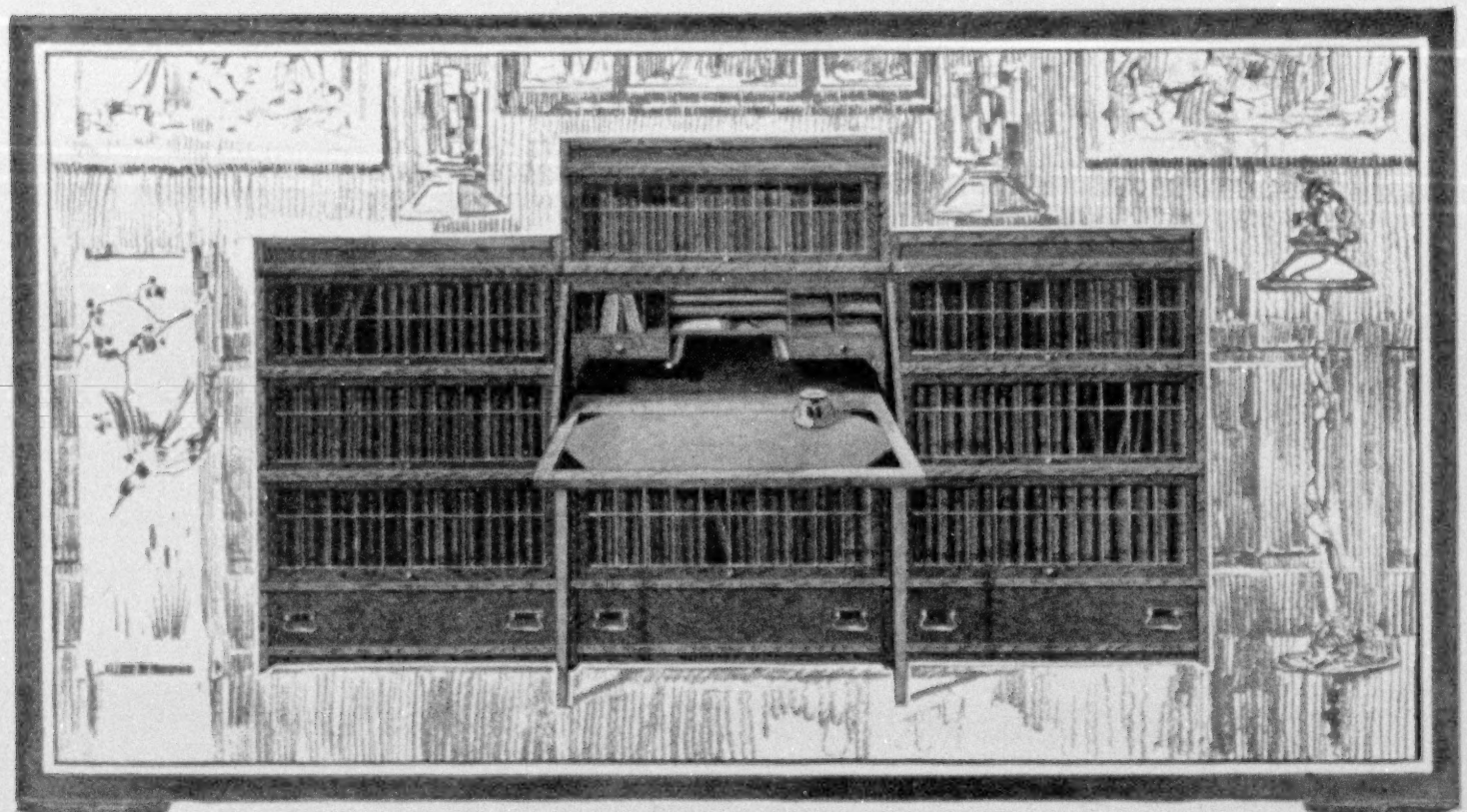

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VOL. XXIII, No. 1 WASHINGTON JANUARY, 1912

THE NATIONAL GEOGRAPHIC MAGAZINE

THE SEA-KINGS OF CRETE

BY REV. JAMES BAIKIE

Explorers with the spade have been making discoveries in Crete which have completely altered our ideas of early civilization in the Ægean Sea. They have found that Crete was the home of the first great sea power, and that more than a thousand years before the time of the Phœnicians, who generally have been credited with inventing writing, the Cretans devised and used the linear characters, which the Phœnicians simply adapted. The Cretans were curiously modern in their dress and habits. Pictures have been uncovered showing ladies long before the time of Homer dressed in Parisian styles, with big hats, high heels, and tight-laced corsets. The houses and the methods of sanitation were extremely modern, far surpassing anything known in civilized times until the last 50 years. Rev. James Baikie, of Edinburgh, has written an entertaining and instructive book summarizing the results of these explorations, particularly those by Dr. A. J. Evans, the pioneer and chief of Cretan explorers. From this book, "The Sea-Kings of Crete," Adam and Charles Black, publishers (New York, The Macmillan Co.), the following article has been abstracted by the Editor. The illustrations, by Dr. A. J. Evans, are from the same source.

THE present generation has witnessed remarkable discoveries in Mesopotamia and in Egypt, but neither Niffur nor Abydos disclosed a world so entirely new and unexpected as that which has been revealed by the work of Schliemann and his successors at Troy, Mycenæ, and Tiryns, and by that of Evans and the other explorers—Italian, British, and American—in Crete.

It was obvious that mighty men must have existed before Agamemnon, but what manner of men they were and in what manner of world they lived were matters absolutely unknown and, to all appearance, likely to remain so. An abundant wealth of legend told of great kings and heroes, of stately palaces, and mighty armies, and powerful fleets, and the whole material of an advanced civilization. But the legends were manifestly largely imaginative—deities and demigods, men and fabulous monsters, were mingled in them on the same plane—and it seemed impossible that we should ever get back to the solid ground, if solid ground had ever existed, on which these ancient stories first rested.

For the historian of the middle of the nineteenth century Greek history began with the First Olympiad, in 776 B. C. Before that the story of the return of the Herakleids and the Dorian conquest of the men of the Bronze Age might very probably embody, in a fanciful form, a genuine historical fact; the Homeric poems were to be treated with respect, not only on account of their supreme poetical merit, but as possibly representing a credible tradition, though, of

THE CUP-BEARER: KNOSSOS

"The colors were almost as brilliant as when laid down over three thousand years before. For the first time the true portraiture of a man of this mysterious Mycenaean race rises before us. The limbs are finely moulded, though the waist is tightly drawn in by a silver-mounted girdle, giving great relief to the hips. The profile of the face is pure and almost classically Greek. . . . There was something very impressive in the vision of brilliant youth and of male beauty, recalled after so long an interval to our upper air from what had been till yesterday, a forgotten world. Our untutored Cretan workmen regarded the discovery of such a painting in the bosom of the earth as nothing less than miraculous, and saw in it the icon of a saint."—A. J. Evans (see pages 13 and 14).

course, their pictures of advanced civilization were more or less imaginative projections upon the past of the culture of the writer's own period or periods. Beyond that lay the great waste land of legend, in which gods and godlike heroes moved and enacted their romances among "Gorgons and Hydras and Chimeras dire."

What proportion of fact, if any, lay in the stories of Minos, the great law-giver, and his war fleet, and his Labyrinth, with its monstrous occupant; of Theseus and Ariadne and the Minotaur; of Dædalus, the first aeronaut, and his wonderful works of art and science; or of any other of the thousand and one beautiful or tragic romances of ancient Hellas, to attempt to determine this lay utterly beyond the sphere of the serious historian.

"To analyze the fables," says Grote, "and to elicit from them any trustworthy particular facts appears to me a fruitless attempt."

Grote's frankly skeptical attitude represents fairly well the general opinion of the middle of last century. The myths were beautiful, but their value was not in any sense historical; it arose from the light which they cast upon the workings of the active Greek mind, and the revelation which they gave of the innate poetic faculty which created myths so far excelling those of any other nation.

Opinions like that so dogmatically expressed by our great historian are no longer held by any one who has followed the current of modern investigations, and remain only as monuments of the danger of dogmatizing on matters concerning which all preconceived ideas may be upset by the result of a single season's spade-

work on some ancient site; and he would be a bold man who would venture today to call "illusory" the search for "points of solid truth" in the old legends, or to assert that "the items of matter of fact, if any such there be," are inextricable from the mass of romantic inventions in which they are embedded.

WHAT CRETE HAS REVEALED

The resurrection of the prehistoric age of Greece and the disclosure of the astonishing standard of civilization which had been attained on the mainland and in the isles of the Ægean at a period at least 2,000 years earlier than that at which Greek history, as hitherto understood, begins may be reckoned as among the most interesting results of modern research into the relics of the life of past ages.

The work, of course, is by no means complete; very probably it is scarcely more than well begun; but already the dark gulf of time that lay behind the Dorian conquest is beginning to yield up the unquestionable evidences of a great, and splendid, and almost incredibly ancient civilization, which neither for its antiquity nor for its actual attainment has any cause to shrink from comparison with the great historic civilizations of Mesopotamia or the Nile Valley.

It is not yet possible to trace and identify the actual figures of the heroes of prehistoric Greece; probably it never will be possible, unless the as yet untranslated Cretan script should furnish the records of a more ancient Herodotus, and a new Champollion should arise to decipher them; but there can scarcely be any reasonable doubt that genuine men and women of Ægean stock filled the rôles of these ancient romances, and that the wondrous story of their deeds is, in part at least, the record of actual achievements.

In this remarkable resurrection of the past the most important and convincing part has been played by the evidence from Crete. The discoveries which were made during the last quarter of the nineteenth century, by Schliemann and his successors, at Mycenæ, Tiryns, Orchomenos, and elsewhere were quite conclusive as to the former existence of a civilization quite equal to, and in all probability the original of, that which is described for us in the Homeric poems; but it was not until the treasures of Knossos and Phæstos in Crete began to be revealed that it became manifest that what was known as the Mycenæan civilization was itself only the decadence of a far richer and fuller culture, whose fountain-head and whose chief sphere of development had been in Crete.

And it has been in Crete that exploration and discovery have led to the most striking illustration of many of the statements in the legends and traditions, and have made it practically certain that much of what used to be considered mere romantic fable represents, with, of course, many embellishments of fancy, a good deal of historic fact.

The position of Crete—"a halfway house between three continents, flanked by the great Libyan promontory, and linked by smaller island stepping-stones to the Peloponnese and the mainland of Anatolia"—marks it out as designed by Nature to be a center of development in the culture of the early Ægean race, and in point of fact ancient traditions unanimously pointed to the great island as being the birthplace of Greek civilization.

WHO WAS MINOS?

It was the surprising claim of the Cretans to possess the burial place of the supreme God of Hellas which first attached to them the unenviable reputation for falsehood which clung to them throughout the classical period, and was crystallized by Callimachus in the form adopted by St. Paul in the Epistle to Titus—"The Cretans are always liars."

It is round Minos, the son of Zeus and Europa, that the bulk of the Cretan legends gathers. The suggestion has been made, with great probability, that the name Minos is not so much the name of a single person as the title of a race of kings. "I suspect," says Professor Murray, "that Minos was a name, like 'Pharaoh' or 'Cæsar,' given to all Cre-

tan kings of a certain type." With that, however, we need not concern ourselves at present, further than to notice that the bearer of the name appears in the legends in many different characters, scarcely consistent with one another or with his being a single person.

The Minos who is most familiar to us in Greek story is not so much the lawgiver and priest of God as the great sea-king and tyrant, the overlord of the Ægean, whose vengeance was defeated by the bravery of the Athenian hero, Theseus. From this point of view, Minos was the first of men who recognized the importance of sea-power, and used it to establish the supremacy of his island kingdom.

But the great King was by no means so fortunate in his domestic relationships as in his foreign advertures. The domestic skeleton in his case was the composite monster the Minotaur, half man, half bull, fabled to have been the fruit of a monstrous passion on the part of the king's wife, Pasiphæ. This monster was kept shut up within a vast and intricate building called the Labyrinth, contrived for Minos by his renowned artificer, Dædalus. Further, when his own son, Androgeos, had gone to Athens to contend in the Panathenaic games, having overcome all the other Greeks in the sports, he fell a victim to the suspicion of Ægeus, the King of Athens, who caused him to be slain, either by waylaying him on the road to Thebes or by sending him against the Marathonian bull.

In his sorrow and righteous anger, Minos raised a great fleet and levied war upon Athens; and, having wasted Attica with fire and sword, he at length reduced the land to such straits that King Ægeus and his Athenians were glad to submit to the hard terms which were asked of them. The demand of Minos was that every ninth year Athens should send him as tribute seven youths and seven maidens. These were selected by lot, or, according to another version of the legend, chosen by Minos himself, and on their arrival in Crete were cast into the Labyrinth, to become the prey of the monstrous Minotaur.

THESEUS, THE DELIVERER OF ATHENS

The first and second installments of this ghastly tribute had already been paid; but when the time of the third tribute was drawing nigh, the predestined deliverer of Athens appeared in the person of the hero Theseus. Theseus was the unacknowledged son of King Ægeus and the Princess Aithra of Troezen. He had been brought up by his mother at Troezen, and on arriving at early manhood had set out to make his way to the court of Ægeus and secure acknowledgment as the rightful son of the Athenian king.

The legend tells how on his way to Athens he cleared the lands through which he journeyed of the pests which had infested them. Sinnis, the pine-bender, who tied his miserable victims to the tops of two pine trees bent toward one another and then allowed the trees to spring back, the young hero dealt with as he had dealt with others; Kerkuon, the wrestler, was slain by him in a wrestling bout; Procrustes, who enticed travelers to his house and made them fit his bed, stretching the short upon the rack and lopping the limbs of the over-tall, had his own measure meted to him; and various other plagues of society were abated by the young hero.

Not long after his arrival at Athens and acknowledgment by his father the time came round when the Minoan heralds should come to Athens to claim the victims for the Minotaur. Seeing the grief that prevailed in the city, and the anger of the people against his father, Ægeus, whom they accounted the cause of their misfortune, Theseus determined that, if possible, he would make an end of this humiliation and misery, and accordingly offered himself as one of the seven youths who were to be devoted to the Minotaur.

Ægeus was loth to part with his newly-found son, but at length he consented to the venture; and it was agreed that if Theseus succeeded in vanquishing the Minotaur and bringing back his comrades in safety he should hoist white sails on his returning galley instead of

XUM

the black ones which she had always borne in token of her melancholy mission.

ARIADNE SAVES THESEUS

So at length the sorrowful ship came to the harbor in the bay below broad Knossos, where Minos reigned, and when the King had viewed his captives they were cast into prison to await their dreadful doom. But fair-haired Ariadne, the daughter of Minos, had marked Theseus as he stood before the King, and love to him had risen up in her heart, and pity at the thought of his fate; and so by night she came to his dungeon, and when she could not persuade him to save himself by flight, because that he had sworn to kill the Minotaur and save his companions, she gave him a clue of thread by which he might be able to retrace his way through all the dark and winding passages of the Labyrinth, and a sword wherewith to deal with the Minotaur when he encountered him.

So Theseus was led away by the guards and put into the Labyrinth to meet his fate; and he went on, with the clue which he had fastened to his arm unwinding itself as he passed through passage after passage, until at last he met the dreadful monster; and there, in the depths of the Labyrinth, the Minotaur, who had slain so many, was himself slain.

ONE OF THE MANY MAGAZINES, WITH JARS AND KASELLES FOR THE STORAGE OF GRAIN AND OIL, FOUND AT KNOSSOS

"Down the center line of each magazine ran a row of small square openings in the floor—'kaselles' as they came to be called—which at one time had evidently been receptacles, some of them perhaps for oil, but some of them certainly for valuables. They were carefully lined with lead, and in some cases the slabs of stone covering them could not be removed without lifting the whole pavement. In spite of such precautions, however, they had been well rifled in ancient days, and little was left to tell of what their contents may once have been." The immense size of these jars may be appreciated by noting the boy standing in the background.

Then Theseus and his companions escaped, taking Ariadne with them, and fled to their black ship and set sail for Attica again; and landing for awhile in the island of Naxos, Ariadne there became the hero's wife. But she never came to Athens with Theseus, but was either deserted by him in Naxos or, as

some say, was taken from him there by force. So, without her, Theseus sailed again for Athens.

But in their excitement at the hope of seeing once more the home they had thought to have looked their last upon, he and his companions forgot to hoist the white sail; and old Ægeus, straining his eyes on Sunium day after day for the returning ship, saw her at last come back black-winged as he had feared; and in his grief he fell, or cast himself, into the sea, and so died, and thus the sea is called the Ægean to this day.

THE UNHAPPY FATE OF MINOS

So runs the great story which links Minos and Crete with the favorite hero of Athens. But other legends, not so famous nor so romantic, carry on the story of the great Cretan King to a miserable close. Dædalus, his famous artificer, was also an Athenian, and the most cunning of all men. To him was ascribed the invention of the plumb-line and the auger, the wedge and the level; and it was he who first set masts in ships and bent sails upon them. But having slain, through jealousy, his nephew Perdix, who promised to excel him in skill, he was forced to flee from Athens, and so came to the Court of Minos.

For the Cretan King he wrought many wonderful works, rearing for him the Labyrinth and the Choros, or dancing-ground, which, as Homer tells us, he "wrought in broad Knossos for fair-haired Ariadne." But for his share in the great crime of Pasiphæ, Minos hated him, and shut him up in the Labyrinth which he himself had made.

Then Dædalus made wings for himself and his son Icarus, and fastened them with wax, and together the two flew from their prison-house high above the pursuit of the King's war-fleet. But Icarus flew too near the sun, and the wax that fastened his wings melted, and he fell into the sea. So Dædalus alone came safely to Sicily, and was there hospitably received by King Kokalos of Kamikos, for whom, as for Minos, he executed many marvelous works. Then Minos, still thirsting for revenge, sailed

A GREAT JAR: KNOSSOS

with his fleet for Kamikos to demand the surrender of Dædalus; and Kokalos, affecting willingness to give up the fugitive, received Minos with seeming friendship, and ordered the bath to be prepared for his royal guest. But the three daughters of the Sicilian King, eager to protect Dædalus, drowned the Cretan in the bath, and so he perished miserably. And many of the men who had sailed with him remained in Sicily, and founded there a town which they named Minoa, in memory of the murdered King.

THE GREAT GULF OF DARKNESS IS DISAPPEARING

Between the Greece of such legends as those which we have been considering and the Greece of the earliest historic period there has always been a great gulf of darkness. On the one side a land of seemingly fabulous kings and heroes and monsters, of fabulous palaces and cities; on the other side, Greece as we know it in the infant stages of its development, with a totally different state of society,

a totally different organization and culture; and in the interval no one could say how many generations, concerning which and their conditions and developments, there was nothing but blank ignorance. So that it seemed as though the marvelous fabric of Greek civilization as we know it were indeed something unexampled, rising almost at once out of nothing to its height of splendor, as the walls of Illium were fabled to have risen beneath the hands of their divine builders.

Indeed, a certain section of students seemed rather to glory in the fact of this seeming isolation of Greek culture, and to deem it little short of profanity to seek any pre-existing sources for it. "Allowing no causation more earthly than vague local influences of air and light, mountain and sea, they would have Hellenism born into the world by a miracle of generation, like its own Athens from the head of Zeus."

But a great civilization can never be accounted for in this miraculous fashion. The origins of even Egyptian culture have begun to yield themselves to patient research, and it is not permissible to believe that the Greek nation was born in a day into its great inheritance, or that it derived nothing from earlier ages and races.

DR. EVANS DISCOVERS THE LABYRINTH OF THE LEGENDS AT KNOSSOS

Most of these traditions clustered round Knossos, the famous capital of Minos, where once stood the Labyrinth, and near to which was Mount Juktas, the traditional burying-place of Zeus.

Dr. A. J. Evans, the chief of Cretan explorers, discovered the site of the Great Palace of Minos, at Knossos, near modern Candia, and has uncovered it to the world. The palace is an enormous building, rivaling in size and magnificence the greatest palaces of ancient days.

"There can be little remaining doubt," says Dr. Evans, "that this vast edifice, which in a broad historic sense we are justified in calling the 'Palace of Minos,' is one and the same as the traditional 'Labyrinth.' A great part of the ground-plan itself, with its long corridors and repeated successions of blind galleries, its tortuous passages and spacious underground conduits, its bewildering system of small chambers, does in fact present many of the characteristics of a maze."

THE EARLIEST KNOWN SCRIPT DISCOVERED IN CRETE

But the discovery which will doubtless prove in the end to be of greater importance than any other, though as yet the main part of its value is latent, was that of large numbers of clay tablets incised with inscriptions in the unknown script of the Minoans. Over a thousand have been collected from various deposits in the palace. Of these deposits, one contained tablets written in hieroglyphic; but the rest were in the linear script, "a highly developed form, with regular divisions between the words and for elegance scarcely surpassed by any later form of writing."

The tablets vary in shape and size, some being flat, elongated bars from two to seven and a half inches in length, while others are squarer, ranging up to small octavo. Some of them, along with the linear writing, supply illustrations of the objects to which the inscriptions refer. There are human figures, chariots and horses, cuirasses and axes, houses and barns, and ingots followed by a balance, and accompanied by numerals which probably indicate their value in Minoan talents. It looks as though these were documents referring to the royal arsenals and treasuries.

"Other documents, in which neither ciphers nor pictorial illustrations are to be found, may appeal even more deeply to the imagination. The analogy of the more or less contemporary tablets, written in cuneiform script, found in the Palace of Tell-el-Amarna, might lead us to expect among them the letters from distant governors or diplomatic correspondence. It is probable that some of them are contracts or public acts, which may give some actual formulæ of Minoan legislation.

"There is indeed an atmosphere of legal nicety, worthy of the House of Minos, in the way in which these records were secured. The knots of string

which, according to the ancient fashion, stood in the place of locks for the coffers containing the tablets were rendered inviolable by the attachment of clay seals, impressed with the finely engraved signets, the types of which represented a great variety of subjects, such as ships, chariots, religious scenes, lions, bulls, and other animals. But—as if this precaution was not in itself considered sufficient—while the clay was still wet the face of the seal was countermarked by a controlling official and the back countersigned and endorsed by an inscription in the same Mycenæan script as that inscribed on the tablets themselves."—Dr. A. J. Evans.

THE TABLETS WERE PRESERVED BY THE GREAT FIRE

The tablets had been stored in coffers of wood, clay, or gypsum. The wooden coffers had perished in the great conflagration which destroyed the palace, and only their charred fragments remained; but the destroying fire had probably contributed to the preservation of the precious writings within by baking more thoroughly the clay of which they were composed.

As yet, in spite of all efforts, it has not proved possible to decipher the inscriptions, for there has so far been no such good fortune as the discovery of a bilingual inscription to do for Minoan what the Rosetta Stone did for Egyptian hieroglyphics. But it is not beyond the bounds of probability that there may yet come to light some treaty between Crete and Egypt which may put the key into the eager searcher's hands, and enable us to read the original records of this long-forgotten kingdom.

Even as it is, the discovery of these tablets has altered the whole conception of the relative ages of the various early beginnings of writing in the Eastern Mediterranean area. The Hellenic script is seen to have been in all likelihood no late-born child of the Phœnician, but to have had an ancestor of its own race.

"Thus," said Dr. Evans, "that great early civilization was not dumb, and the written records of the Hellenic world were carried back some seven centuries beyond the date of the first-known historic writings.

"But what, perhaps, is even more remarkable than this, is that, when we examine in detail the linear script of these Mycenæan documents, it is impossible not to recognize that we have here a system of writing, syllabic and perhaps partly alphabetic, which stands on a distinctly higher level of development than the hieroglyphics of Egypt or the cuneiform script of contemporary Syria and Babylonia. It is not till some five centuries later that we find the first dated examples of Phœnician writing."

The old Cretan tradition that the Phœnicians did not invent the letters of the alphabet, but only changed those already existing, is thus amply justified, for this seems to have been precisely what they did. The Phœnician mind, if not original, was at all events practical. The great stumbling-block in the way of the ancient scripts was their complexity—a fault which the Minoan users of the Linear script had evidently already begun to recognize and endeavor to amend.

What the Phœnicians did was to carry the process of simplification farther still, and to appropriate for their own use out of the elements already existing around them a conveniently short and simple system of signs. The position which they came to occupy, after the Minoan Empire of the sea had passed away, as the great carriers and middlemen of the Mediterranean, gave their system a spread and a utility possible to no other system of writing; and so the Phœnician alphabet gradually came to take its place as the basis of all subsequent scripts.

Unquestionably it was a great and important service which was thus rendered by them; but, all the same, the beginnings of European writing must be traced not to them, but to their predecessors, the Minoans, and the clay tablets of Knossos, Phæstos, and Hagia Triada are the lineal ancestors of all the written literature of Europe.

THE KING'S GAMING-BOARD

The king's gaming-board was a splendid and convincing proof of the magnificence of the appointments of the house of Minos in its palmy days. This was a

board which had evidently been designed for use in some game, perhaps resembling draughts or chess, in which men were moved to and fro from opposite ends. The board was over a yard in length and rather more than half a yard in breadth (see page 20).

Its framework was of ivory, which had originally been overlaid with thin gold plate, and it was covered with a mosaic of strips and discs of rock-crystal, which in their turn had been backed alternately with silver and blue enamel paste. Round its margin ran a border of marguerites whose central bosses were convex discs of rock-crystal which had probably been set originally in a blue paste background.

At the top of the board were four beautiful reliefs representing nautilus shells, set round with crystal plaques and bossed with crystal. Below them came four large medallions, set among crystal bars backed with silver plate, and then eleven bars of ribbed crystal and ivory alternating with one another. Eight shorter bars of crystal backed with blue enamel fill spaces on either side of the topmost section in the lower part of the board, which consists of a two-winged compartment with ten circular openings, the medallions of which have been broken out, but were probably of crystal backed with silver. The remaining space of the board was filled with flat bars of gold-plated ivory alternating with bars of crystal on the blue enamel setting.

The mere summary of its decoration conveys no idea of the splendor of a piece of work which, as Professor Burrows says, "defies description, with its blaze of gold and silver, ivory and crystal." The late Minoan monarch who used it—for so gorgeous a piece of workmanship can scarcely have been designed for any one but a king—must have been as splendid in his amusements as in all the other appointments of his royalty.

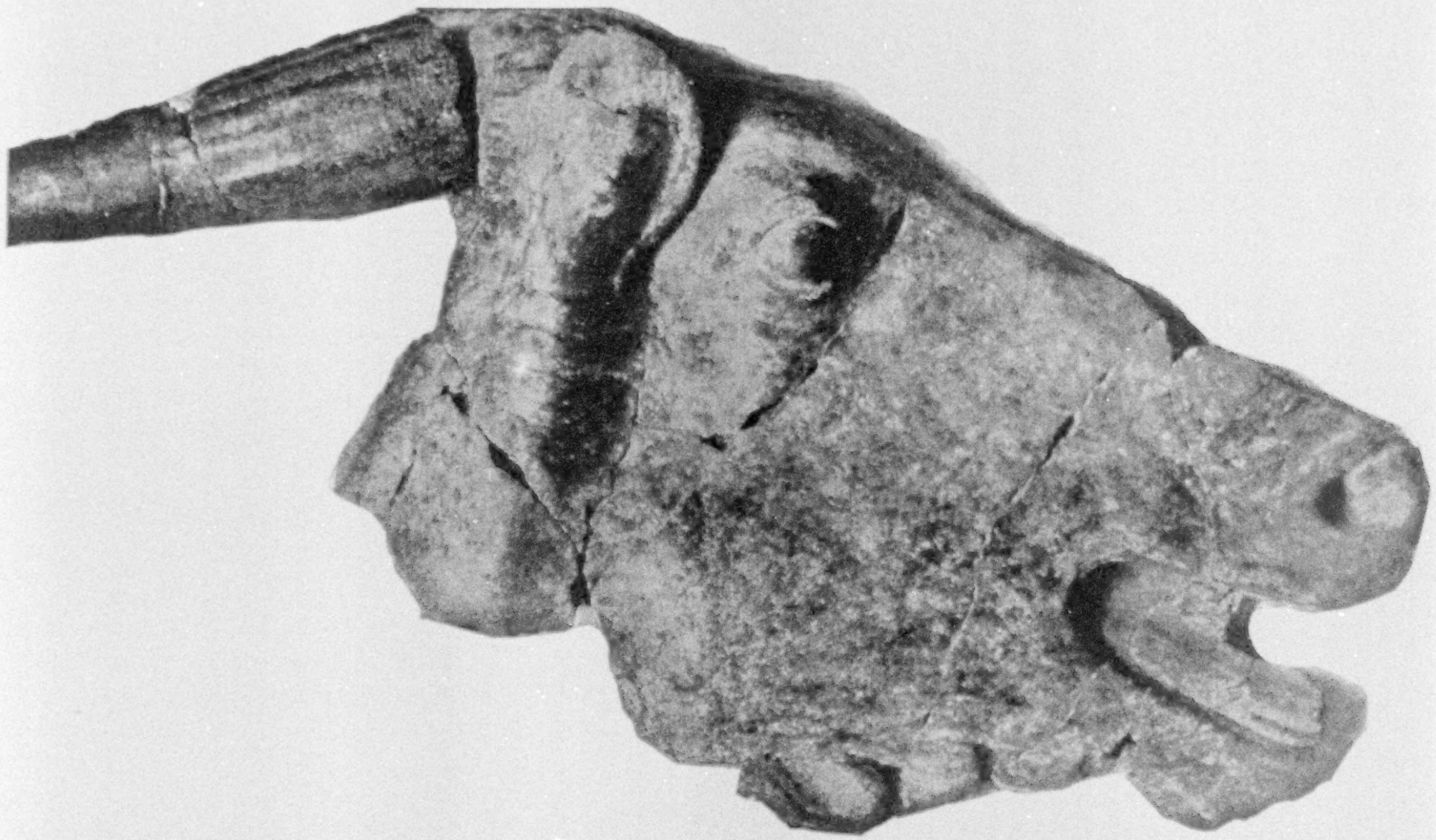
BULL-FIGHTS 4,000 YEARS AGO

The gaming-board suggested the lighter and more innocent side of the palace life (see page 20). A darker and more tragic aspect of it was hinted at by the fresco which was found among debris fallen from a chamber overlooking the so-called Court of the Olive Spout. This was a picture of those sports of the arena in which the Minoan and Mycenæan monarchs evidently took such delight, and in which the main figures were great bulls and toreadors. In this case the picture is one of three toreadors, two girls and a boy, with a single bull. The girls are distinguished by their white skins, the more vari-colored costumes, their blue and red diadems, and their curlier hair, but are otherwise dressed like their male companion.

In the center of the picture the great bull is seen in full charge. The boy toreador has succeeded in catching the monster's horns and turning a clean somersault over his back, while one of the girls holds out her hands to catch his as he comes to the ground. But the other girl, standing in front of the bull, is just at the critical moment of the cruel sport. The great horns are almost passing under her arms, and it looks almost an even chance whether she will be able to catch them and vault, as her companion has done, over the bull's back, or whether she will fail and be gored to death.

With such a sport, in which life or death depended upon an instant, in which a slip of the foot, a misjudgment of distance, or a wavering of hand or eye meant horrible destruction, we may be sure that the tragedies of the Minoan bull-ring were many and terrible, and that the fair dames of the Knossian palace, modern in costume and appearance as they seem to us, were as habituated to scenes of cruel bloodshed as any Roman lady who watched the sports of the Colosseum and saw gladiators hack one another to pieces for her pleasure.

That the sport of the bull-ring, and particularly this exciting and dangerous game of bull-grappling, was an established and habitual form of Minoan sport is proved by the multitude of representations of it which have survived. The charging bull of Tiryns, the first to be discovered, was a mystery so long as it stood alone; but it is only one of a succession of such pictures—painted upon walls, engraved upon gems, and



RELIEF OF BULL'S HEAD, FOUND IN THE GREAT PALACE AT KNOSSOS, CRETE, BY DR. A. J. EVANS

This and the other illustrations in this article are from "The Sea-Kings of Crete," by Rev. James Baikie. Adam and Charles Black, publishers

stamped on seal impressions—which show that the Cretans and Mycenæans were as fond of their bull-fights as a modern Spaniard of his.

THE DUNGEONS OF MINOS

Where did they get the toreadors, male and female, whose lives were to be devoted to such a terrible sport—a sport practically bound to end fatally, sooner or later? We may be fairly sure, at all events, that bull-grappling was not taken up voluntarily even by the male, and still less by the female, toreadors; and one of the discoveries made gave its own suggestion of an explanation.

Not very far from the north entrance of the palace, beneath the room where had been found the fresco of the Little Boy Blue gathering crocuses—an innocent figure to cover so grim a revelation (see page 13)—there came to light the walls of two deep pits, going right down, nearly 25 feet, to the virgin soil. The pits were lined with stonework faced with smooth cement, and it seems most probable that these were the dungeons of the palace, in which we may imagine that the miserable captives brought back by the great king's fleet from its voyages of conquest and plunder, and the human tribute paid by the conquered states, dragged out their existence until the time came for them either to be trained for the cruel sport to which they were devoted, or actually to take their places in the bull-ring.

If it be so, then the dungeons of Minos would keep their captives securely enough; escape from the deep pits, with their smooth and slippery walls, must have been practically impossible, save by connivance on the part of the guards or by the intervention of some tender-hearted Ariadne.

If those dark walls could only reveal the story of the doomed lives which they once imprisoned, we should probably be able to realize, even more fully than we do, the shadowed side of all the glittering splendor of Knossos, and the grim element of barbaric cruelty which mingled with a refined artistic taste and a delight in all forms of beauty.

In none of these great civilizations of the ancient world were splendor and cruelty separated by any great interval from one another, nor was a very remarkable degree of refinement inconsistent with a carelessness of life, and even such a thirst for blood, as we consider more natural in a savage state; but it is seldom that the evidences of the two things lie so close to one another as where at Knossos the innocent figure of the crocus-gatherer almost covers the very mouth of the horrible pit in which the captives of Minos waited for the day when their lives were to be staked on the hazard of the arena.

THE DRAINAGE SYSTEM WAS MARVELOUSLY MODERN

Most surprising of all, however, in many respects, was the revelation of the amazingly complete system of drainage with which the palace was provided. The gradient of the hill which underlay the domestic quarter of the palace enabled the architect to arrange for a drainage system on a scale of completeness which is not only unparalleled in ancient times, but which it would be hard to match in Europe until a period as late as the middle of the nineteenth century of our era. A number of stone shafts, descending from the upper floors, lead to a well-built stone conduit, measuring one meter by one-half meter, whose inner surface is lined with smooth cement. These shafts were for the purpose of leading into this main conduit the surface water from the roofs of the palace buildings, and thus securing a periodical flushing of the drains. In connection with this surface-water system there was elaborated a system of latrines and other contrivances of a sanitary nature, which are "staggeringly modern" in their appointments.

In the northeastern quarter, under the Corridor of the Game-Board, are still preserved some of the terra-cotta pipes which served as connections to the main drain. They are actually faucet-jointed pipes of quite modern type, each section two and one-half feet in length and six inches in diameter at the wide end, and narrowing to four inches at the smaller end. "Jamming was carefully prevented

by a stop-ridge that ran round the outside of each narrow end a few inches from the mouth, while the inside of the butt, or broader end, was provided with a raised collar that enabled it to bear the pressure of the next pipe's stop-ridge, and gave an extra hold for the cement that bound the two pipes together."—Dr. A. J. Evans.

Indeed, the hydraulic science of the Minoan architects is altogether wonderful in the completeness with which it provided for even the smallest details. On a staircase near the east bastion, on the lower part of the slope, a stone runnel for carrying off the surface water follows the line of the steps. Lest the steepness of the gradient should allow the water to descend too rapidly and flood the pavement below, the runnel is so constructed that the water follows a series of parabolic curves, and the rapidity of its fall is thus checked by friction.

The main drains are duly provided with manholes for inspection, and "are so roomy," says Dr. Evans, "that two of my Cretan workmen spent days within them clearing out the accumulated earth and rubble without physical inconvenience." Those who remember the many extant descriptions of the sanitary arrangements, or rather the want of sanitary arrangements, in such a town as the Edinburgh of the eighteenth century will best appreciate the care and forethought with which the Minoan architects, more than 3,000 years earlier, had provided for the sanitation of the great Palace of Minos.

We are, unfortunately, without any evidence as to the appearance of the great palaces in their finished state. The inner plan can be traced, but it is difficult to arrive at any idea of what these huge buildings must have looked like from the outside. It is fairly evident, however, that there cannot have been any symmetrical balancing of the different architectural features.

The palaces were more like small towns than simple residences, and the impression made upon the eye must have been due more to the great mass and extent of the building than to any symmetry of plan. Probably we must conceive of them as great complex blocks of solid building, rising in terrace above terrace, the flat roofs giving the appearance of squareness and solidity to the whole. On a closer approach the eye would be impressed by the wide and spacious courts, the stately porticoes, the noble stairways, and the wealth of color everywhere displayed; but, on the whole, so far as can be judged, it was only from within that the splendor of the Minoan palaces could be fairly estimated.

A palace such as that of Knossos sheltered an extraordinary variety and complexity of life. An abundance of humbler rooms served for the accommodation of the artists and artisans who were needed for the service and adornment of the palace, and of whom whole companies must have lived within the walls, "dwelling with the king for his work," like the potters and foresters mentioned in Scripture. Several shrines and altars provided for the religious needs of the community. Rooms of state were set apart for public audiences and for council meetings. In fact, the building was not only a king's dwelling place, but the administrative center of a whole empire, and within its walls there was room for the housing of their records.

THE THRONE OF MINOS

The discovery of the very throne of Minos—for such we may fairly term it—was surely the most dramatic and fitting recompense for Dr. Evans' patience and persistence. No more ancient throne exists in Europe, or probably in the world, and none whose associations are anything like so full of interest.

The throne-room still preserved among its débris many relics of former splendor. Fragments of blue and green porcelain, of gold-foil, and lapis lazuli and crystal were scattered on the floor, and several crystal plaques with painting on the back, among them an exceedingly fine miniature of a galloping bull on an azure ground, while an agate plaque bearing a relief of a dagger laid upon a folded belt almost equalled cameo-work in the style and delicacy of its execution.

Photo from "The Sea-Kings of Crete," by Rev. James Baikie

A MAGNIFICENT VASE WITH PAPYRUS RELIEFS, FOUND IN THE ROYAL VILLA

In a small room on the north side of the central court was found a curiously quaint and delicate specimen of early fresco painting, the figure of a Little Boy Blue, more thoroughly deserving of the title than Gainsborough's famous picture; for, strangely enough, he is blue in his flesh-tints, picking and placing in a vase the white crocuses that still dapple the Cretan meadows.

FRESCOES OF WONDERFUL BEAUTY PRESERVED FOR 3,500 YEARS

The northern side of the palace was finished with another portico, and in this part of the building there came to light a series of miniature frescoes, valuable not only as works of art, but as contemporary documents for the appearance, dress, and surroundings of the mysterious people to whom this great building was once home.

Here were groups of ladies with the conventional white complexion given by the Minoan artists to their womankind, wonderfully bedizened with costumes resembling far more closely the evening dress of our own day than the stately robes of classic Greece, with their severe lines. In their very low-necked dresses,

THEATRAL AREA, KNOSSOS, RESTORED (NEAR MODERN CANDIA)

with puffed sleeves, excessively slender waists and flounced skirts, and their hair elaborately dressed and curled, they were as far as possible removed from our ideas of Ariadne and her maids of honor, and might almost have stepped out of a modern fashion-plate.

"Mais," exclaimed a French savant, on his first view of them; "mais ce sont des Parisiennes" (see also page 16).

The domestic quarter of the palace still reveals in some of its rooms the environment of luxury and beauty in which the Minoan royalties lived. The Queen's megaron may be taken as typical. A row of pillars rising from a low, continuous base divides the room into two parts. The upper surface of the base on either side of the pillars is of stucco molded so as to form a long couch, which was doubtless covered with cushions when the room was in use. Light was furnished in the daytime, according to Cretan palace practice, not by windows, but by light-wells, of which there are two, one on the south and one on the east side.

In one of these light-shafts the brilliant white stucco surface which reflected the light into the room is decorated with a modeled and painted relief, of which a fragment has survived, representing a bird of gorgeous plumage, with long, curving wing and feathers of red, blue, yellow, white, and black. Near the light-well, on the other side of the line of pillars, outside nature was brought within doors by a beautiful piece of fresco painting, which shows fishes swimming through the water and dashing off foam-bells and ripples in their rapid course.

Along the north wall of the room ran another gay fresco, representing a company of dancing girls on a scale of half life-size. One of the dancers is clad in a jacket with a yellow ground and blue and red embroidered border, beneath

which is a diaphanous chemise. Her left arm is bent and her right stretched forward; her features are piquant, if not beautiful, and a slight dimple shows at the corner of her lips. Her long black hair, elaborately waved and crimped, floats out on either side of her head as she turns in the movement of the dance.

The fragments of decoration which have survived help us to realize a very beautiful room, gay with color, yet never garish because of the softness of the indirect illumination, in which we may imagine the Minoan court ladies, in their modern gowns, reclining on the cushions of the long couch, discussing the incidents of the last bull-grappling entertainment, the skill of the young Athenian, Theseus, and the obvious infatuation of Princess Ariadne, or employing their time more usefully in some of the wonderful embroidery work in which the fashion of the period delighted.

By night the scene in the palace would be even more picturesque. Great stone lamps, standing on tall bases and each bearing several wicks on the margin of its broad bowl of oil, flared in the rooms and corridors, lighting up the brightly colored walls and sending many-tinted reflections dancing from the bronze and copper vases and urns which decorated the passages and the landings of the stairways, while through the breadths of light and shadow moved in an always changing stream of color the gaily dressed figures of the Minoan court.

THE DRESS OF THE MEN WAS VERY SIMPLE; OF THE WOMEN MOST ELABORATE AND MODERN

Judging from the surviving pictures, the Minoan men were bronzed, with dark hair and beardless faces, their figures were slender, and their slenderness was made all the more conspicuous by the fashion which prevailed of drawing in the waist by a tightly fastened belt, which seems, in some cases at least, to have had metal edges; but muscularly they were well developed, and the pictures suggest litheness and agility in a high degree. "One would say a small-boned race, relying more on quickness of limb and brain than on weight and size."

The hair of the men was worn in a somewhat elaborate fashion, being done up in three coils on the top of the head, while the ends of it fell in three long curls upon the shoulders. On the other hand, their dress was extremely simple, consisting normally of nothing but a loin-cloth, girt by the broad belt already mentioned, the material of which the loin-cloth was made being frequently gaily colored or patterned, as in the case of the Cup-Bearer, whose garment is adorned with a dainty quatre-foil design.

That more elaborate robes were worn on certain occasions of importance is shown by the sarchophagus at Hagia Triada, where the Lyre-Player wears a long robe coming down to the ankles and bordered with lines of color, while the other men in the scene wear tucked robes reaching a little below the knees (or possibly baggy Turkish trousers); and also by the Harvester Vase, where the chief figure in the procession is clad in a stiff garment, which has been variously interpreted as a wadded cuirass, or as a cope of some stiff fabric.

On their feet they wore sometimes shoes, with puttees twisted round the lower part of the leg, and sometimes half-boots, as shown on the Chieftain Vase and one of the Petsofa figurines. Indeed, the footgear of the Minoans seems to have been somewhat elaborate. In the representations of the Keftiu, on the walls of Rekh-ma-ra's tomb, the shoes are white, and have bindings of red and blue, and in some cases are delicately embroidered. Such examples as the shoe on an ivory figure found at Knossos and the terra-cotta model of a shoe found at Sitia show the daintiness with which the Minoans indulged themselves in the matter of footwear.

In personal adornment the men to some extent made up for their simplicity in the matter of dress. The Cup-Bearer wears a couple of thick bracelets on his upper arm and another, which bears an agate signet, on his wrist, and such decorations seem to have been in common use. The King, whose figure in low relief has been reconstructed from fragments found at Knossos, wears peacock plumes upon his head, while round his neck he has a collar of fleurs-

de-lis, wrought, no doubt, in precious metal.

The Minoan women are depicted with a perfectly white skin, which contrasts strongly with the bronzed hue of the men. The deep copperly tint of the men and the dead white skin of the women is, of course, to be accepted only as a convention, similar to that adopted by Egyptian artists, meant to express a difference of complexion caused by greater or less exposure to the weather; and we need not imagine that there was so great a contrast between the coloring of men and women in actual life as would appear from the paintings.

If the dress of the male portion of the populace was simple, that of the female was the reverse. An elaborate and tight-fitting bodice, cut excessively low at the neck, covered, or affected to cover, the upper part of the body, which is so wasp-waisted as to suggest universal tight-lacing. From the broad belt hung down bell-shaped skirts, sometimes flounced throughout their whole length, sometimes richly embroidered, as in the case of a votive skirt represented in faïence among the belongings of the Snake Goddess found in the Temple Repositories.

In some cases—*e. g.*, that of the votaress of the Snake Goddess—the skirt, below a small panier or apron, is composed of different colored materials combined in a chequer pattern distantly resembling tartan. A fresco from Hagia Triada represents a curious and elaborate form of dress, consisting apparently of wide trousers of blue material dotted with red crosses on a light ground and most wonderfully frilled and vandyked. Diaphanous material was sometimes used for part of the covering of the upper part of the body, as in the case of some of the figures from the Knossos frescoes.

Hairdressing, as already noticed, was very elaborate, and above the wonderful erections of curls and ringlets which crowned their heads the Minoan ladies, if one may judge from the Petsofa figurines, wore hats of quite modern type, and fairly comparable in size even with those of the present day (see pp. 13-14).

A seal from Mycenæ, representing three ladies adorned with accordeon-plaited skirts, shows that heels of a fair height were sometimes worn on the shoes.

Necklaces, bracelets, and other articles of adornment were in general use, and the workmanship of some of the surviving specimens is astonishingly fine.

Altogether, so far as can be estimated from the representations which have come down to us, the appearance of a Minoan assembly would, to a modern eye, seem curiously mixed. The men would fit in with our ideas of their period, but the women would remind us more of a European gathering of the mid-nineteenth century.

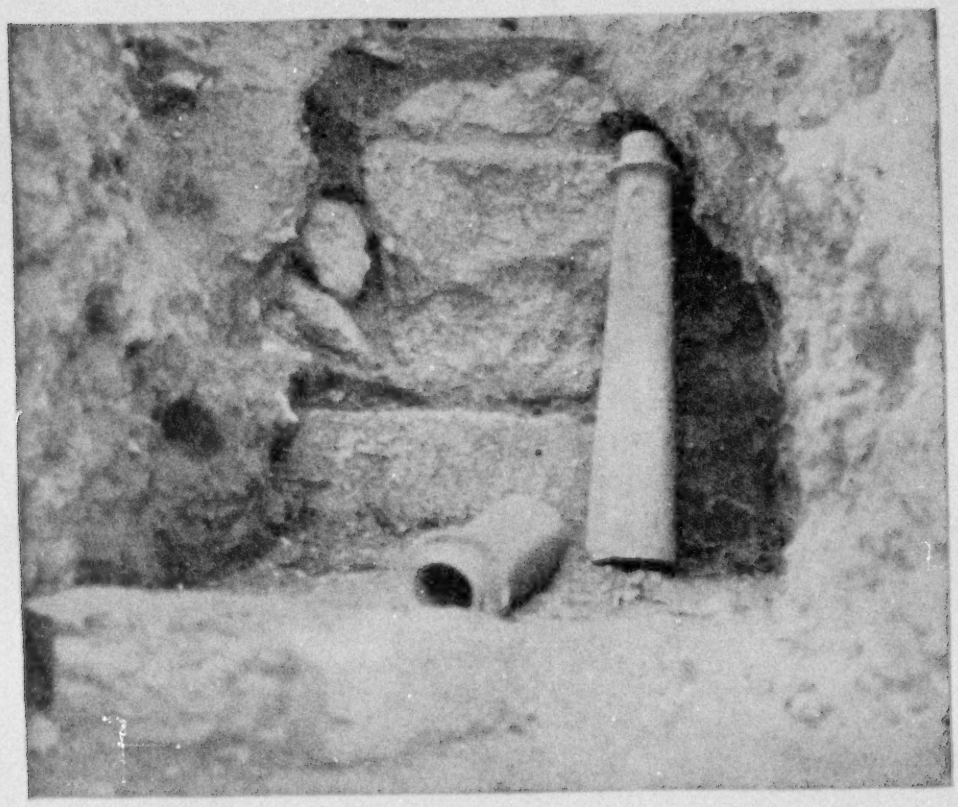
THE HOUSES WERE ALSO MODERN IN APPEARANCE

The houses which were occupied by these modern-looking ladies and their mates were unexpectedly unlike anything in the house-building of the classical period. There is little of the uniformity of style and arrangement which characterizes the ordinary Greek house. The Minoan burgher built his home as the requirements of his site and of his household suggested, and was not the slave of any fixed convention in the matter of plan.

The houses at Gournia, Palaikastro, and Zakro, which may be taken as typical specimens of ordinary Minoan domestic architecture, must have been much more like modern houses than anything that we know of in Greek towns of the classical period; and the elevations of Minoan villas preserved in the faïence plaques from the chest at Knossos suggest the frontages of a suburban avenue.

Some of the Knossian plaques show houses of three and four stories, with windows filled in with a red material which, as Dr. Evans suggests, may have been oiled and tinted parchment.

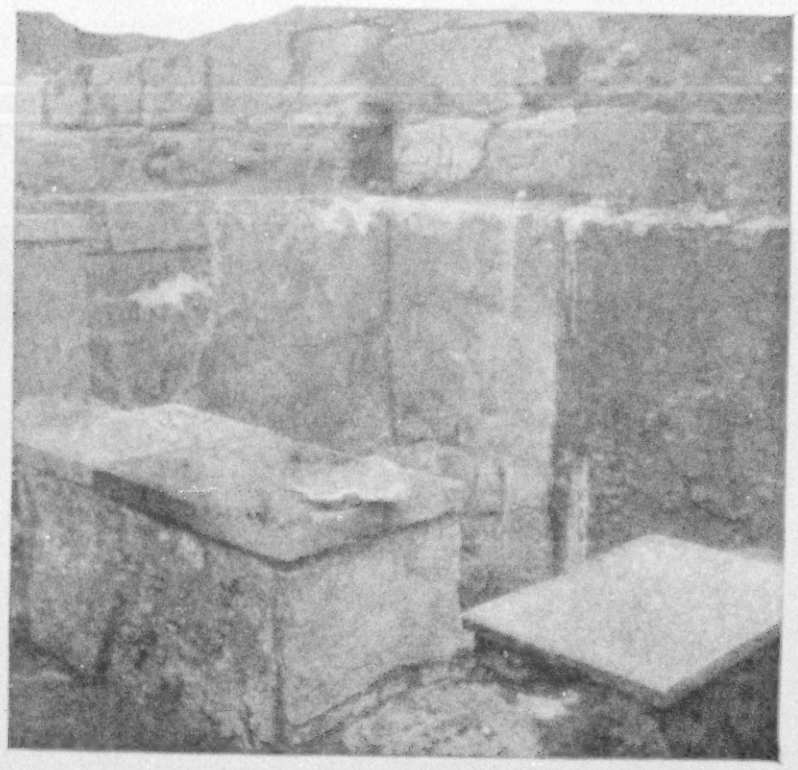
In such houses, as distinguished from the palaces, there was no separation between the apartments of men and women. The fabric of the houses was generally of sun-dried brick, reared upon lower walls of stone. Some of the



MAIN DRAIN: KNOSSOS

TERRA-COTTA DRAIN-PIPES, 3,500 YEARS OLD

"The hydraulic science of the Minoan architects is wonderful in the completeness with which it provided for even the smallest details. On a staircase, . . . lest the steepness of the gradient should allow the water to descend too rapidly and flood the pavement below, the runnel is so constructed that the water follows a series of parabolic curves, and the rapidity of its fall is thus checked by friction" (see pages 11 and 12).



A BATHROOM IN THE PALACE OF KNOSSOS

Knossian villas, however, were plastered and timbered, the round beam-ends showing in the frontage. Oblong windows took the place of the light-wells which give indirect illumination to the palace rooms. The accommodation must have been fairly extensive. The smaller houses have six to eight rooms, the larger ones twice that number; while one of the houses in Palaikastro has no fewer than 23 rooms.

Within doors the walls were finished with smooth plaster and probably decorated with painting, though of course on an humbler scale than in the palaces. The floors were of flagstones and cement, even in the upper stories, and in some cases of cobbles or of earth rammed hard.

The furniture of the rooms has perished, except in the case of such articles as were of stone or plaster; but the evidence we possess of the comfort and even the luxury of the life of these times in other respects suggests that the townsfolk of Gournia and the other Cretan towns were not lacking in any of the essentials of a comfortable home life. The great chest at Knossos, which was once decorated with the faïence plaques, was of course part of the furnishing of a royal home, and we are not to suppose that such magnificent pieces of furniture were common; but in their own fashion the ordinary Minoan houses were doubtless quite adequately appointed, and the great variety of domestic utensils which has survived shows that life in the Bronze Age homes of Crete was by no means a thing of primitive and rough-and-ready simplicity, but was well and carefully organized in its details.

It has been remarked that "cooking in Homer is monotonous, because no one eats anything but roast meat"; but this accusation could not be brought against the Minoans, who had evidently attained to a considerable skill and variety in the way in which they prepared their viands for the table. The three-legged copper pot, which was the most common vessel for cooking purposes, was supplemented by stew-pans with condensing lids and a variety of other forms of sauce-pans, while the number of different types of perforated vessels for straining and other purposes shows the care with which the art of cooking was attended to. Probably the Minoan kitchen, though we are still much in the dark as to its form, was almost as well equipped for its special functions as the kitchen of the present day.

Even at this exceedingly early stage of human progress the various branches of industry had become fairly separated and specialized—more so, perhaps, than in the Homeric period—and a considerable variety of tools was employed in the various crafts. The carpenter was evidently a highly skilled craftsman, and the tools which have survived show the variety of work which he undertook.

A whole carpenter's kit lay concealed in a cranny of a Gournia house, left behind in the owner's hurried flight when the town was attacked and burned. He used saws long and short; heavy chisels for stone and light for wood; awls, nails, files, and axes much battered by use; and, what is very important to note, they resemble in shape the tools of today so

closely that they furnish one of the strongest links between the first great civilization of Europe and our own. Such tools were, of course, of bronze.

Probably the chief industry of the island was the manufacture and export of olive oil. The palace of Knossos has its room of the olive press and its conduit for conveying the product of the press to the place where it was to be stored for use, and probably many of the great jars now in the magazines were used for the storage of this indispensable article.

LIFE EVIDENTLY WAS DEMOCRATIC

Of the social life of the people in these prehistoric times we know practically nothing. Only one inference, possibly precarious enough, may be made from one of the features of the architecture of Knossos. There is no attempt to seclude the life of the palace from that of the town and country around it. On the contrary, the building seems almost to have been arranged with the view of affording the citizens of the Minoan Empire every facility for intercourse with the royal household. The great West Court, with its portico and its seats along the palace wall, suggests considerable freedom of access for the populace to the immediate neighborhood of royalty.

It is perhaps rather a large inference to conclude that "the very architecture of the palaces of Knossos and Phæstos may testify to the power of the democracy," but at least the thoughtfulness with which the comfort of the people visiting the palace was provided for and the general openness and lack of any jealous seclusion, testified to by the whole style of the buildings, suggest that the relations between the kings of the house of Minos and their subjects were much more human and pleasant than those obtaining in most ancient kingdoms.

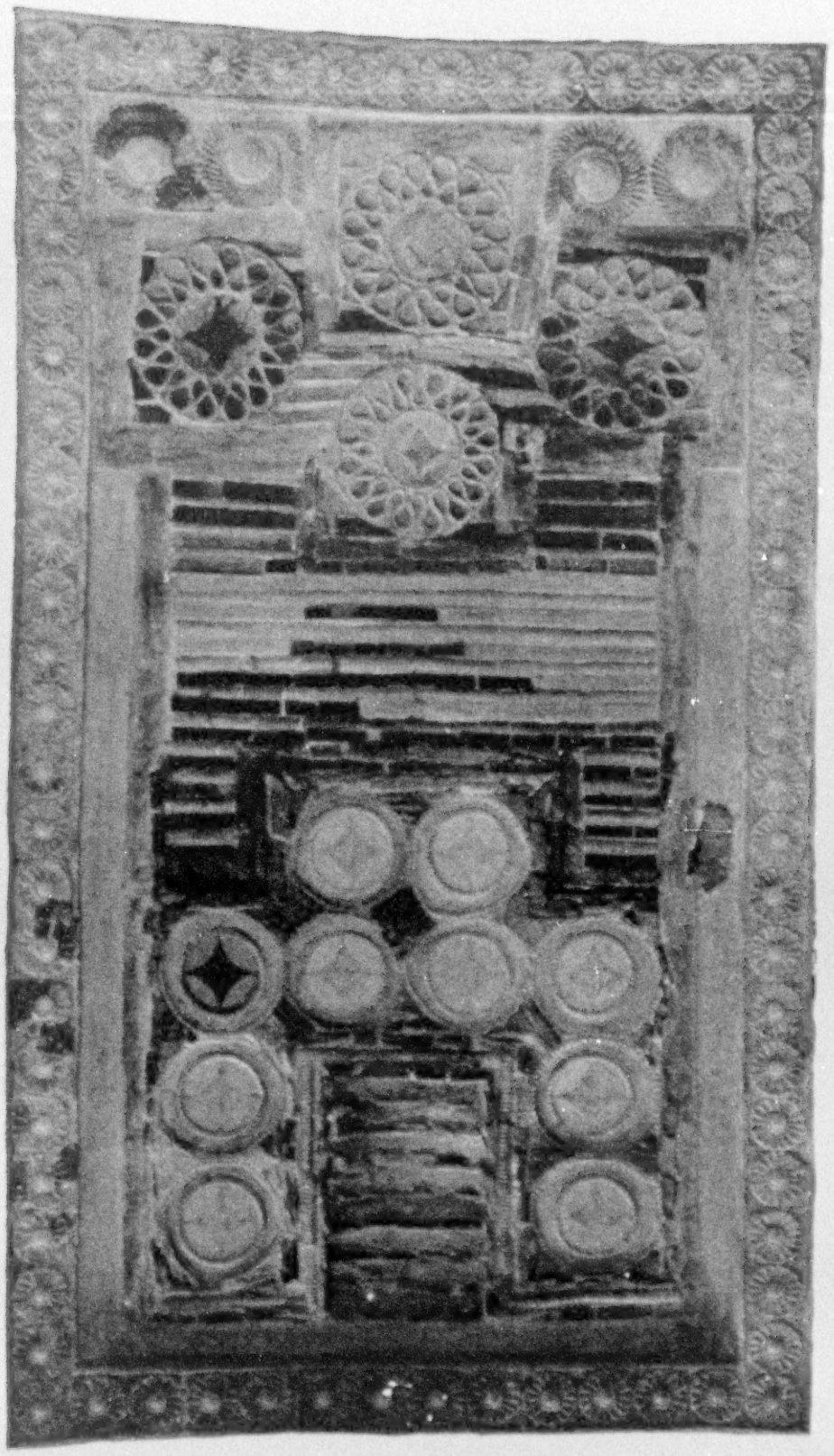
From their art one would, on the whole, conclude the people to have been a somewhat attractive race, frankly enjoying the more pleasant aspects of life and capable of a keen delight in all the beauties of nature. Minoan art has little that is somber about it; it is redolent of the open air and the free ocean, and a people who so rejoiced in natural beauty and delighted to surround themselves with their own reproductions and interpretations of it can scarcely have been bowed beneath a heavy yoke of servitude or have lived other than a comparatively free and independent life.

How much the Greeks of the classic period imbibed of the spirit of this gifted and artistic race we can only imagine. The artistic standpoint of the Hellenic Greek is somewhat different from that of his Minoan or Mycenæan forerunner, and he has lost that keen feeling for nature which is so conspicuous in the work of the earlier stock; but the two races are at least at one in that profound love of beauty which is the dominant characteristic of the Greek nature, and it may well be that something of that feeling formed part of the heritage which the conqueror took over from the conquered, and which, added to the virility and intellectual power of the northern race, made the historic Greek the most brilliant type of humanity that the world has ever seen.

THE GREAT PALACE WAS NOT FORTIFIED

The main entrance of the palace at Knossos seemingly lay on the north side, where the road from the harbor, now Candia, 3½ miles distant, ran up to the gates. Here was the one and only trace of fortification discovered in all the excavations. The entrance passage was a stone gangway, on the northwest side of which stood a great bastion with a guard-room and sally-port—a slender apology for defense in the case of a prize so vast and tempting as the palace of Knossos. Obviously the bastion, with its trifling accommodation for an insignificant guard, was never meant to defend the palace against numerous assailants or a set siege; it could only have been sufficient to protect it against the sudden raid of a handful of pirates sweeping up from the port.

How was it that so great and rich a structure came to be left thus practically defenseless? The mainland palaces of the Mycenæan age at Tiryns and Mycenæ are, so to speak, buried in fortifications.



THE KING'S GAMING-BOARD (SEE PAGES 8-9)

Their vast walls, 57 feet thick in some parts at Tiryns, 46 feet at Mycenæ, towering still, after so many centuries of ruin, to a height of 24½ feet in the case of the smaller citadel, and of 56 feet at the great stronghold of Agamemnon; their massive gateways, and the ingenious devices by which the assailant was obliged to subject himself in his approach to a destructive fire on his unshielded side—everything about them points to a land and a time in which life and property were continually exposed to the dangers of war, and the only security was to be found within the gates of an impregnable stronghold.

But Knossos, far richer, far more splendid than either Tiryns or Mycenæ, lies virtually unguarded, its spacious courts and pillared porticoes open on every side. Plainly the Minoan kings lived in a land where peace was the rule and where no enemy was expected to break rudely in upon their luxurious calm. And the reason for their confidence and security is not far to seek, if we remember the statements of Thucydides and Herodotus.

"The first king known to us by tradition as having established a navy is Minos," says the great Athenian historian. The Minoan Empire, like our own, rested upon sea power. Its great kings were the sea-kings of the ancient world, the first sea-kings known to history — over-lords of the Ægean long before the grave Tyrian trader had learned "the way of a ship in the sea" or the land-loving Egyptian had ventured his timid squadrons, at the command of a great queen, so far as Punt.

And so the fortifications of their capital and palace were not of the huge gypsum blocks which they knew so well how to handle and work. They were the wooden walls, the long, low, black galleys, with the vermilion bows and the square sail and the greeping rows of oars, that lay moored or beached at the mouth of the Kairatos River, or cruised

around the island coast, keeping the Minoan peace of the Ægean.

THE MINOANS WERE NOT WARLIKE

So long as the war-fleet of Minos was in being, Knossos needed no fortifications. No expedition of any size could force a landing on the island. If the crew of a chance pirate galley, desperate with hunger or tempted by reports of the wealth of the great palace, succeeded in eluding the vigilance of the Minoan cruisers and made a swift rush up from the coast, there was the bastion with its armed guard, enough to deal with the handful of men who could be detached for such a dare-devil enterprise. But in the fleet of Knossos was her fate, and if once the fleet failed she had no second line of defense on which to rely against any serious attack. There is every evidence that the fleet did fail at last (see page 22).

So far as the evidence goes, the Minoan Empire does not appear to have been a specially warlike one. No doubt there was a good deal of fighting in its history, as was the case with all ancient empires; but the insular position of Crete and the predominance which the Minoan navy established on the sea saved the island empire from the necessity of becoming a great military power, and the absence of spirit of militarism is reflected in the national art.

While an Assyrian palace would have been decorated from end to end with pictures of barbarous bloodshed and plunder, while even the milder Egyptians would have adorned their walls with records of the conquests of their Pharaohs, the kings of the house of Minos turned to other and more gentle scenes for the decoration of their homes. Flower-gatherers and dancing-girls, harvest festivals and religious processions, appealed to their minds far more than the endless and monotonous succession of horrors with which the Mesopotamian monarchs delighted to disfigure their walls; and even the sangers of the bull-ring, as seen on the Knossian frescoes, are mild and gentle when compared with the abominations where Teumman has his head sawed off with a short dagger and other unfortunates are flayed alive or have their tongues torn out.

The archives of the palace at Knossos certainly show that a military force was kept on foot and was thoroughly organized and well looked after. There are records of numbers of chariots, and of the issue of equipments to the charioteers of the force; and many of the tablets refer to stores of lances, swords, bows, and arrows, a store of nearly 9,000 arrows being mentioned in one of the finds, while an actual magazine containing hundreds of bronze arrow-heads has been discovered.

We may remember that in ancient warfare the Cretan bowmen were as famous as the Balearic slingers or the archers of England. On the whole, however, the genius of the Minoans, like our own, was more commercial than military, though no doubt they were not devoid of the fighting spirit when occasion arose. Their kinsmen of Mycenæ and Tiryns, less happily situated, were forced to develop the military side of life; but the position and the maritime power of Crete secured for the fortunate island those long centuries of tranquil growth which were so fruitful in the arts of peace.

A TERRIBLE CATASTROPHE SUDDENLY OVERWHELMED THE EMPIRE

Probably the power and grandeur of the Minoan Empire was never more imposing than during the hundred years before 1400 B. C. The house of Minos at Knossos had reached its full development, and stood in all its splendor, an imposing mass of buildings crowning the hill of Kephala, with its five stories, around the great central court, its theatral area, and its outlying dependencies. Within its spacious porticoes and corridors the walls glowed with the brilliant colors of innumerable frescoes and reliefs in colored plaster. The cup-bearer, the queen's procession, the miniature frescoes of the palace sports, stood out in all their freshness. Magnificent urns in painted pottery, with reliefs like those of the great papyrus vase, decorated the halls and courts, and were rivaled by huge stone amphoræ, exquisitely carved.

XUM

THE HARVESTER VASE: HAGIA TRIADA

The king and his courtiers were served in costly vessels of gold, silver, and bronze *repoussé* work. The empire of the sea-kings was at its apogee, and on every hand there were the evidences of security and luxury.

But, as in the contemporary Egypt of Amenhotep III, a similar development in all the comforts and luxuries of civilized life was swiftly followed by the downfall under Akhenaten, so in Crete the luxury of the late Minoan II was only the prelude to its great and final disaster. Exactly when the catastrophe came we cannot tell.

That there was a huge disaster about 1400 B. C. which broke forever the power of the sea-kings is unmistakable. The Minoan kingdom did not fall from over-ripeness and decay, as was the case with so many other empires. The latest relics of its art before the catastrophe show no signs of decadence; the latest specimens of its linear writing show a marked advance on those of preceding periods.

A civilization in full strength and growth was suddenly and fatally arrested. Everywhere throughout the palace at Knossos there are traces of a vast conflagration. The charred ends of beams and pillars, the very preservation of the clay tablets with their enigmatic records, a preservation due probably to the tremendous heat to which they were exposed by the furious blazing of the oil in the stone jars of the magazines, the traces of the blackening of fire upon the walls—everything tells of an overwhelming tragedy.

Nor was the catastrophe the result of an accident. There is no mistaking the significance of the fact that in the palace scarcely a trace of precious metal, and next to no trace of bronze, has been discovered. Fire at Knossos was accom-

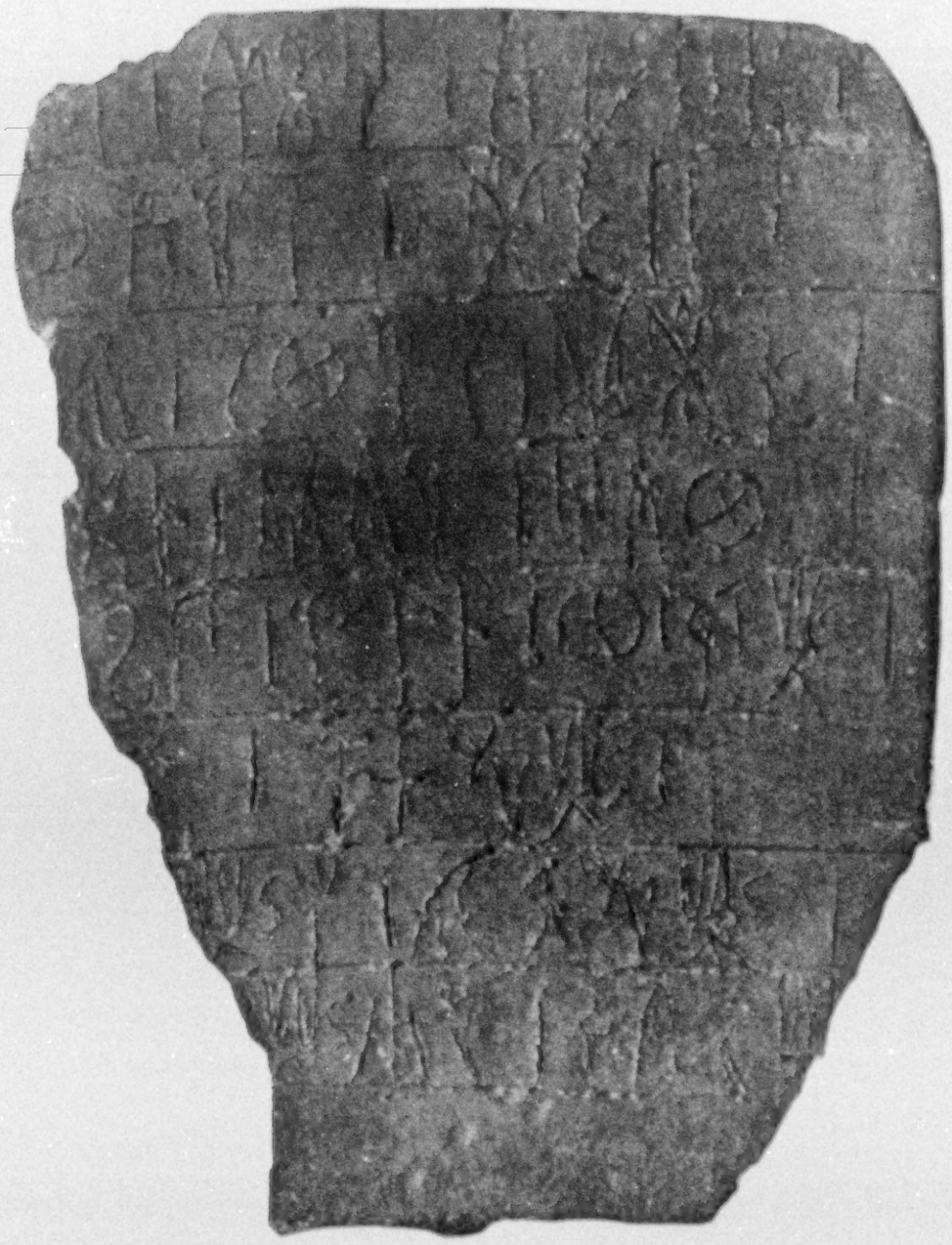
GREAT STAIRCASE: PHÆSTOS, CRETE

The chief glory of the palace at Phæstos is the great flight of steps, 45 feet in width, which formed its state entrance, the broadest and most splendid staircase that ever a royal palace had. "No architect," says Mosso, "has ever made such a flight of steps out of Crete." . . . The palaces of Knossos and Phæstos wonderfully resemble each other in the general ideas that determine their structure, though, of course, there are many variations in detail. But, as contrasted with the sister palace, the stately building at Phæstos has exhibited a most extraordinary dearth of the objects of art which formed so great a part of the treasures of Knossos.

panied by plunder, and the plundering was thorough. A few scraps of gold leaf, and the little deposit of bronze vessels that had been preserved from the plunderers by the fact that the floor of the room in which they were found had sunk in the ruin of the conflagration, are evidences, better than absolute barrenness would have been, to the fact that the place was pillaged with minute thoroughness, and the unfinished stone jar in the sculptor's workshop tells its own tale of a sudden summons from peaceful and happy toil to the stern realities of warfare.

The evidences from Phæstos and Hagia Triada tallies with that from Knossos. Everywhere there are the traces of fire on the walls and a sudden interruption of quiet and luxurious life. The very stone lamps still stand in the rooms at Hagia Triada, and on the stairs of the Basilica and Knossos, as they stood to lighten the last night of the doomed Minoans.

Of course there are no records, and if there were we could not read them; but it is easy to imagine the disastrous sea fight off the coast; the wrecks of the once invincible Minoan fleet driven ashore in hopeless ruin in the shallow bay, like the Athenian fleet at Syracuse; the swift march of the mainland conquerors up the valley; the brief, des-



ONE OF THE THOUSAND CLAY TABLETS WITH LINEAR SCRIPT FOUND AT KNOSSOS, CRETE, BY DR. A. J. EVANS

Of all the discoveries yet made on Cretan soil, that which, in the end, will doubtless prove to be of the greatest importance is the discovery of the various systems of writing which the Minoans successively devised and used. Photo from "The Sea Kings of Crete," by Rev. James Baikie. Adam and Charles Black, publishers (see pages 7 and 8).

perate resistance of the palace guards, and then the horrors of the sack, and the long column of flushed victors winding down to their ships laden with booty, and driving with them crowds of captive women. Similar scenes must have been enacted at Phæstos and Hagia Triada, either by other forces of invaders or by the same host sweeping round the island.

From this overwhelming disaster the Minoan Empire never recovered. The palace at Knossos was never reoccupied as a palace, at least on anything like the

scale of its former magnificence. The invaders possibly departed as swiftly as they had come; or if, as seems more probable, they eventually established themselves as a ruling caste among the subject Minoans, they chose for their dwellings other sites than those of the old palaces. The broken fragments of the Minoan race crept back after the sack to the blackened ruins of their holy and beautiful house, not to rebuild it, but to divide its stately rooms and those of its dependencies by rude walls into poor dwelling-houses, where they lived on—a very different life from that of the golden days before the sack.

THE QUILLS OF A PORCUPINE

By Frederick V. Coville

THE porcupine is an animal quiet and inoffensive in his own pursuits, but powerful in the means of his defense and terrible in his use of it against his chief enemy, the dog.

Carper and I were hunting coyotes and bears in the backwoods of Oregon. There were seven dogs in our pack. They had been specially selected and trained to hunt bear. Two were pure-bred foxhounds, whose part it was to find the trail and lead the pack on it unerringly by their marvelous keenness of scent. Nig, the old one, was scarred and partly crippled from encounters with bear. Rover, two years old, though with less experience, was in the prime of activity, keenness, and endurance. Ranger, the staghound, was tall and strong and, when the game was in sight, very swift. In the open he could catch and kill a coyote. Tige, the bloodhound, was the heaviest of the pack. His nose was keen, and on a bear trail he was true and tireless, and savage in the operations at the finish. In other game he had less interest, and when he slept he growled and dreamed of bear hunts. Jule was a mixed bloodhound and bulldog, and Bounce and Drum were her two yearling pups, one yellow, the other brindle.

For two hours one morning we had followed the dogs without picking up a fresh trail. We were passing from an open ridge into a forest of fir and pine when the young foxhound, first sniffing excitedly with his nose to the ground, raised the coarse hair between his shoulders, bayed sharply, and plunged into the timber. The other dogs closed in behind and disappeared.

Carper tore after them through the brush, scaling the slippery logs without danger by means of his spiked lumberman's shoes, and I followed as best I could. Approaching a little opening in the timber, I heard the sound of a general fight, Carper yelling, cursing, and kicking among the dogs, then a rifle shot, and then another. When I burst through the chaparral Carper was still yelling and kicking the dogs away from the carcass of a porcupine, grazed by his first bullet and plowed open by the second. "Well," said he, "we are in for it now."

The porcupine had taken a position beneath a log that was raised a little above the ground. As the dogs attacked him he turned and struck them terrific blows in the face with his short clubbed tail, almost as muscular as a gorilla's arm, and at every stroke he left a mark like a cushionful of barbed needles. Dogs less fierce would have quit sooner and suffered less, but that bunch of bear-dogs had behind them a thousand years of the fiery passion of the slayer. The dogs that could reach the porcupine bit him in the back and tail till mouth and tongue were a bloody, quivering mass of barbs. Only by the fiercest onslaught on the dogs themselves had Carper been able to open them up so that he could shoot the porcupine.

The dogs were now pawing their faces and plowing their noses along the ground in agony, breaking off some of the quills at the surface and driving the barbed

Photo by Frederick V. Coville

PHOTOGRAPH OF THE STAGHOUND "RANGER," FROM WHOSE FACE AND HEAD WE EXTRACTED 600 QUILLS AFTER HIS FIGHT WITH THE PORCUPINE

(SEE PAGE 31)

Photo from U. S. Forest Service

SOME OF THE PACK OF DOGS WHICH ATTACKED THE PORCUPINE WITH SUCH DISASTROUS RESULTS: WALLOWA NATIONAL FOREST, OREGON

This photograph shows Forest Service hunter J. K. Carper coming to camp with the hide of a grizzly bear that he had killed near the scene of the fight, while patrolling the coyote-proof sheep pasture.

points deeper into the flesh. The old dogs, who had been through similar experiences before, would come up and allow the quills to be pulled out as long as they could stand the pain, and then break away to paw and plow again.

When the few superficial quills had been removed the real work of saving the dogs' lives began. We took off our coats, set our guns against a tree, and went at the task. One by one the dogs were caught. Sitting upon the animal's crouching body, Carper held the head between his knees, gripping ear and jaw in his powerful grasp, while I pulled out the quills.

The main part of a porcupine quill is smooth and white and has the tough, flexible texture of the quill of a bird's feather, but for a distance of about half an inch from the needle-sharp point the quill is hard, black, slender, and armed with innumerable barbs. The quills vary greatly in length, thickness, and amount of barbing, the shorter and stouter ones having the longest points and most effective barbs, the larger, thinner quills gradually merging into the long, coarse hairs of the animal's pelt.

A long-pointed quill with the barbed portion fully imbedded in the nose of a dog often resisted the strongest pull that either of us could give, notwithstanding an excellent hold on the body of the quill between the thumb and the bent forefinger. The pain must have been intense. The most resistant quills were pulled either by the teeth or by improvised pliers made of a half-split stick, in the crack of which the quill was caught and tightly held.

I was assured afterward by an old woodsman that an imbedded quill could be removed more easily and with less

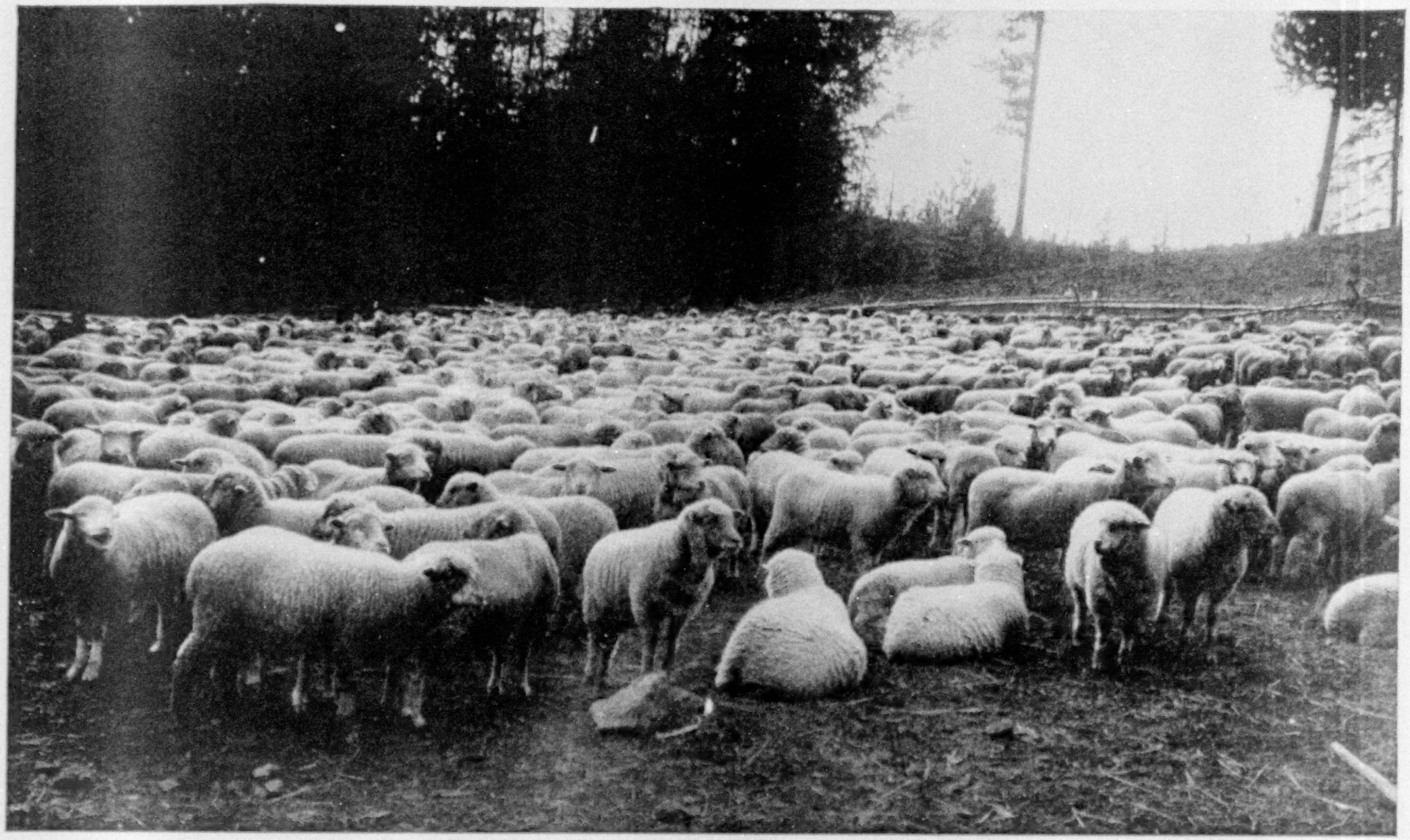


Photo from U. S. Forest Service

BAND OF EWES AND LAMBS AT THE END OF A SUMMER'S GRAZING IN A COYOTE-PROOF PASTURE: WALLOWA NATIONAL FOREST

Note the fat condition and contented appearance of the sheep after a summer's freedom from the fear of wild animals and the worry of herder and sheep dogs

Photo from U. S. Forest Service

SMALL BUNCH OF THE PASTURED BAND OF EWES AND LAMBS: COYOTE-PROOF PASTURE, WALLOWA NATIONAL FOREST

At the close of the season the lambs were nine pounds heavier than the same class of lambs from bands that were herded on the same kind of land outside the pasture

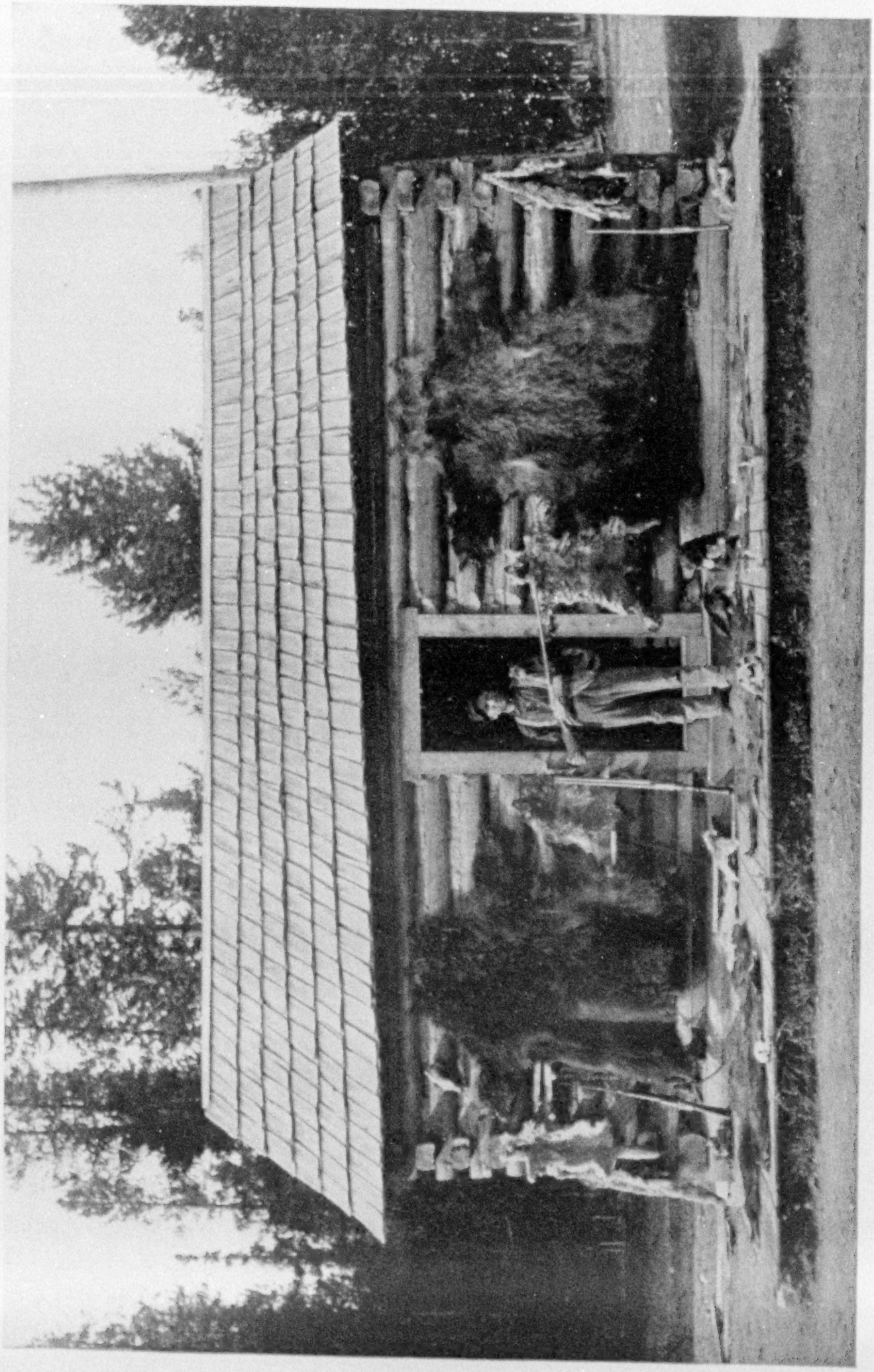


Photo from U. S. Forest Service

A FOREST-SERVICE HUNTER, J. K. CARPER, AT HOME, SHOWING A FEW SKINS OF SOME OF THE LARGE PREDATORY ANIMALS KILLED OUTSIDE THE FENCE OF THE COYOTE-PROOF PASTURE: WALLOWA NATIONAL FOREST, OREGON

pain by rolling it between the thumb and finger as it is pulled. To use his expression, the barbed point would "unscrew." A minute examination of a quill-point did not show any spiral arrangement of the barbs, but it did show that the barbs are not rigid, but flexible, and I have no doubt that by twisting as described the barbs would be bent to one side and the quill be much more easily withdrawn.

The dogs varied in the manner in which they took their punishment. The yellow pup and the young foxhound had only a few quills, and they howled when these were pulled. The old foxhound was hard to hold and was inclined to be ugly. Jule complained, but allowed the pulling to proceed, although her jaws were reeking with blood and saliva. Drum, the brindle pup, showed his bulldog stock by submitting to the long ordeal with barely a whimper.

The two big dogs—Tige, the bloodhound, and Ranger, the staghound—were a problem. Either was strong enough, if he was so inclined, to break Carper's hold, and the staghound, furthermore, had offered to bite his master. He was in by far the most serious condition of any of the dogs. He had more quills in his face than any other, and some were near, though fortunately not in, his eyes. They were liable at any time to work there, however, through his agonized pawing. We considered shooting him to end his misery, but Carper hated to do it. We concluded to go back to camp, get something to eat, and decide the dog's fate afterward.

On the way back I asked Carper whether the dogs would not learn to let a porcupine alone. He replied that they would not; that the older dogs had been through the experience repeatedly, though he had never seen a pack quite so thoroughly done up, and that if they ran across a porcupine the next day they would undoubtedly tackle him. Evidently dogs of this fighting quality are no more deterred by such an experience than is a bulldog deterred from fighting a second time because he has once before been bitten in a fight.

After our meal we took the remaining quills out of Tige. Those on the outside of his head Carper pulled alone. The great bloodhound wagged his tail after each pull; I could not tell whether out of gratitude to his master, or because he thought the two were engaged in some sort of game, rough and painful, but nevertheless to be treated good-naturedly. The quills within his mouth were taken out with a pair of steel pliers while two men held him, a stout stick of wood between his jaws as a precaution against biting.

The staghound we decided to give a chance for his life, though neither of us relished the prospect of lacerating his head to do it. His face was beginning to swell and he was dozy until we stirred him up. He was ready to fight us all. We tied him down under a log, and one man held his body, the other his head, while I pulled the quills with the steel pliers.

By actual count we took 568 quills out of that staghound. Eighty-one of these were inside the line of his teeth, in his gums, the roof of his mouth, and his tongue. At least 30 had been pulled out at odd times before the count began, and during the following days over 20 more worked out of his misshapen head at various points. It was not a nice or a pleasant task, and the repulsive details of quill-pulling have already been sufficiently explicit. The staghound lived and fortunately lost neither eye.

It was a curious and a fearful weapon that nature had given to this otherwise weak and peaceable porcupine, with which in defense of his liberty and his life he dealt a terrible retribution to seven powerful enemies, half of whom he would have killed had not still greater odds been matched against him.

Photos by P. A. Talbot, from the Geographical Journal of London

EKOI GIRLS IN "FATTING-HOUSE" COSTUME

NOTES ON THE EKOI

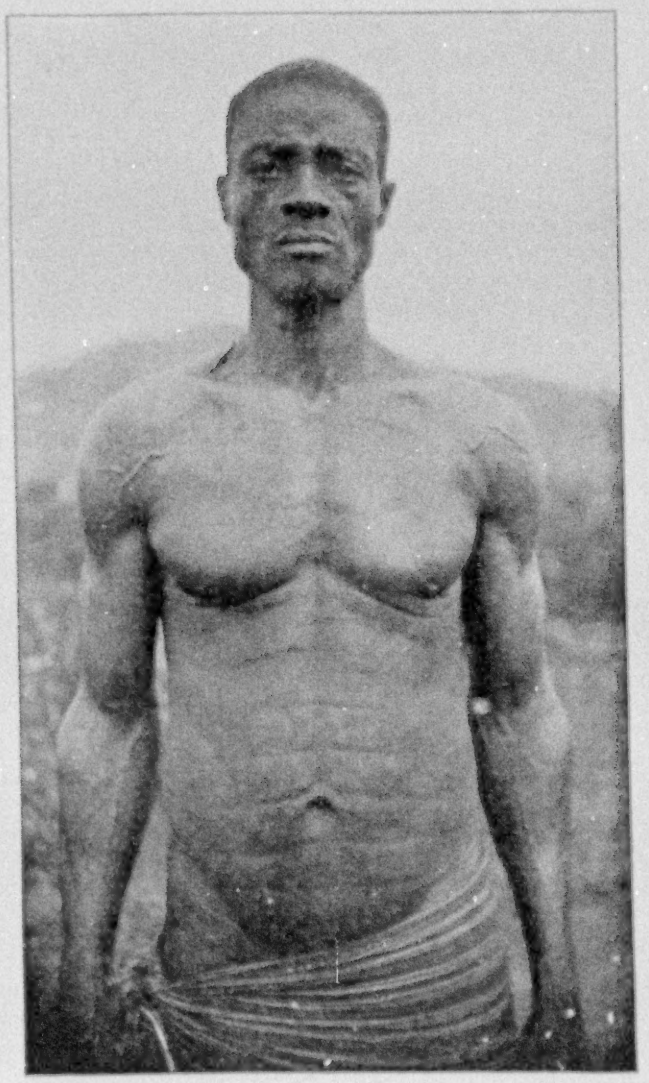
By P. A. Talbot

THE Ekoi, of extreme southern Nigeria, on the Equator, should be, and probably are, among the happiest people on earth, for they have no taxes to pay, no wearisome restrictions to undergo, and so fruitful is the land that a few weeks' labor is enough to supply them with food, home, and clothes for a whole year.

The Ekoi are devoted parents, but it will take years of patient teaching before they grasp the importance of fresh air and the simplest sanitary measures for the health of their little ones.

They have curious beliefs as to the advent and death of their babes. One charming superstition forbids all quarreling in a house where there are little children. The latter, so they say, love sweet words, kind looks, and gentle voices, and if these are not to be found in the family into which they have reincarnated, they will close their eyes and forsake the earth till a chance offers to return again amid less quarrelsome surroundings.

At the new year, and on all great festivals, the chief "societies" of men, women, and children come up to the station to give a series of dances. To the Ekoi, dancing is one of the main occupations of life. With them the dance provides an outlet both for the dramatic instinct and for religious fervor. In all



Photos by P. A. Talbot, from the Geographical Journal of London

EKOI GIRL ATTENDANT ON JUJU "IMAGE"

TYPE OF EKOI

(SEE PAGE 34)

"Egbo plays" the chief character, or "image," as it is called, is dressed to represent the "Egbo" itself.

It is the habit of the Egbo Club, at certain times of the year, to take the sacred images and other paraphernalia to a part of the bush where a little hut of green boughs has been built to receive them. Sentries are then posted to keep all intruders from coming within a mile of this spot. On one occasion two young girls, sisters, happened to have missed the patrol and have trespassed unwittingly within the sacred precincts, probably in search of nuts or bush fruits, which abound everywhere. They were caught by the sentries, brought before the "Egbo," condemned to death, and hanged almost immediately.

Their brother, who was a member of the highest grade of the society, was allowed, as a great favor, to be present at their death and afterwards to carry home the bodies to his family. Of redress, in such a case, there could be neither hope nor even thought.

The Egbo "image," of which each company has at least one, is a figure robed from crown to heel in a long garment pierced with eye-holes (see page 35). It usually bears on its head a wooden framework covered with skin and shaped like a human head, often with two eyes, looking both ways—into the future and back to the past—the symbol of the omniscience of the deity. This curious apparition runs up and down, generally accompanied by two attendants clothed in gorgeous close-fitting knitted garments, usually of red, yellow, and white.

Soon after my arrival information was brought that something of an unusual nature was happening in Oban. On investigation it appeared that a certain chief had fallen under the suspicion of having, in the guise of a were-leopard, killed several cows and goats. Preparations were on foot for ridding the town of him in a summary manner when the arrival of the "white man" put an end to the proceedings of the *ex tempore* tribunal. Chief Agbashan, a splendid hunter, is believed to have the power of transforming himself into an elephant—an accomplishment that would certainly be of great use to him when out after these creatures.

An old woman of Oban, named Awaw Ita, was suspected of a still more sinister familiar. Her husband had a sore on his ankle. Somehow or other the idea got about that this could not heal because a snake came out of her mouth to lick the wound every night while they slept. The case came into court, as the "Egbo Society" had tried and sentenced the woman, which of course they had no right to do. Curiously enough, as in similar cases in our own country during the Middle Ages, she herself firmly believed in the truth of the story, and owned to it when she thought that such a confession might cost her her life.

At a small place nestling at the base of beautiful purple hills, on one occasion the children gave a particularly charming series of games, singing all the while in the pretty lilting way usual among them. Nothing could be more graceful than the waving arms and swaying limbs of the little brown forms as they bent and moved, always in perfect time to their song. The musical faculty of this people is certainly wonderful, though developed along peculiar lines. During the whole period spent among them I have never heard a false note nor found a dancer or accompanist one fraction of a second out of time.

At the little village of Niaji the only attempt at portrait modeling known in this part of the world is to be seen. It represents Maia, priestess of Nimm. The figure, modeled, rudely enough, in mud on a framework of sticks, is seated above the grave of the woman it commemorates. Over her the frame of a tiny hut has been built, and round this are hung most of the things used by the dead woman in her life—all broken, according to the funeral custom of the race. No man is allowed to share in the mysteries of Nimm, though a woman is sometimes, though rarely, chosen as the head of "Jujus," in which both sexes share.

Not even the fear of death would induce a male Ekoi to intrude at the celebration of the women's rites. Should a woman think that she has any cause of

EGBO HOUSE AND JUJU TREES (SEE PAGES 34 AND 37)

Photos by P. A. Talbot, from the Geographical Journal of London

AN EKOI HUNTING JUJU

This is the great "hunting Juju" of the Ekoi, and has never before appeared to a European. The "image" was supposed to be deaf to human voices, and to hear only those of the bush beasts, save when awakened by the call of the trumpet. It is the Juju that is supposed to have the power of "smelling out" all others, and carries an axe in its jaws as a sign of its special fierceness. Powerful as it is, however, it was not proof against the very human weakness of wishing to have its photograph taken, and appeared, on this inducement, among its less exclusive brothers.

EKOI GIRL WITH NSIBIDI WRITING ON FACE

ONE OF THE MANY MODES OF EKOI COIFFURE

Photos by P. A. Talbot, from the Geographical Journal of London

complaint against a man, she brings her grievance before the head-woman of her society, who is usually a priestess of Nimm. The latter then calls a meeting, and, if the complaint is thought justified, steps are taken to bring the offender to a sense of his duty. The Ekoi are a polygamous people, but the chief wife, not the husband, is the head of the house. Each wife has control over her children, who almost invariably go with her if she leaves her husband, and her rights as to property are most strictly safeguarded by native law.

In an article such as this there is necessarily no room to give an idea of the richness and beauty of folklore among this people, who have legends to explain practically all their customs and beliefs. Perhaps, however, it is allowable to quote one short story, which, though far below the level of Ekoi legends in point of style, explains more clearly than would be possible in any other way the position which woman holds in this country.

"At the beginning of things," so the legend runs, "the world was peopled by women only. One day the earth-god, Awbassi Nsi, happened by accident to kill a woman. On hearing this, the rest gathered together and prayed that, if he meant to slay them, he would bring destruction on all together, rather than kill them one by one. Awbassi was sorry for the grief that he had caused; so he offered to give them anything they should choose out of all his possessions to make up to them for their fellow-woman, whom he had slain. They begged him to mention what he had to give, and said that they would all cry 'Yes' when he named the thing which they wished to have. Awbassi began and mentioned one by one all his fruits, fowls, and beasts, but at each they shouted 'No.'

"At length the list was nearly ended; only one thing remained to offer. 'Will you, then, take a man?' asked Awbassi, at last.

"'Yes,' they roared, in a great shout, and, catching hold of one another, started dancing for joy at the thought of the gift which Awbassi was sending.

"They took man, therefore, as compensation for the fellow-woman whom they had lost. Thus men became the servants of women, and have to work for them up to this day, for though a woman comes under the influence of her husband on marriage, yet she is his proprietor, and has a right to ask any service and expect him to do whatever she chooses."

The religious observances of the Ekoi are altogether a fascinating study. Beneath many modern corruptions and disfigurements are yet to be found traces of an older, purer form of worship—traces which carry us back to the oldest-known Minoan civilization and link the belief of the modern Ekoi with that of the ancient Phœnician, the Egyptian, the Roman, and the Greek. In some ways, indeed, the Ekoi form may be termed the most ancient of all, for whereas in the oldest-known representations of Minoan bird and tree worship the tree has become almost entirely conventionalized into pillar shape, and later on becomes a mere pedestal to support the bird, among the Ekoi it still keeps its original form—that of the actual living tree.

The smallest town has its juju tree. There are many varieties of these, but each stands alone, usually in the open space before the Egbo house. They are generally bound round with tie-tie or surrounded by a little fence festooned with linked rings of the same. On the branches of these trees hang countless nests of one kind or another of the weaver bird. Even the smallest child knows that these are sacred, for on them depends the prosperity of the town.

Should the birds be injured or driven away, the women would become barren and even the cattle cease to bear. Surely in this form we have the oldest picturing of the wedding of earth and sky—sky father and earth mother—for of all created things the bird is most akin to air and sky, while the tree, with its roots in the dark ground, is the best and oldest personification of mother earth. In the course of ages, strangely enough, mother earth has become father earth for the Ekoi, whose two principal deities are now Awbassi Awsaw, the sky god, and the earth god, Awbassi Nsi. Enough legends and fragments of ritual,

however, have been collected to show that the older idea has not yet died out.

Everywhere in the bush grow giant trees, often over 200 feet in height and from 80 to 100 feet in girth. Perhaps the most noticeable of these are the cotton trees, the smooth bark and straight shafts of which give them the appearance of giant columns, on which the blue sky rests like a dome. These forest giants are objects of veneration among Efik and Ekoi alike, and well it is to propitiate the genii of the trees, lest the latter open and imprison the unwary wayfarer, like Ariel on the island of Prospero.

In the whole country there are no open spaces, save those which have been cleared as sites for villages or farms. The Ekoi spend their whole lives in the twilight of the beautiful, mysterious bush, peopled to their fancy not by wild animals alone, of which they have no fear, but by were-lopards and all kinds of terrible half-human shapes, and by the genii of trees, rocks, and rivers. Here more truly even than in old Greece the terror of Pan is everywhere. This atmosphere of twilight and mystery explains the grafting of juju and fetish worship onto the purer and more ancient forms of religion. So far as can be traced, the Ekoi have steadily trekked down from the north, for the site of each new town is to the south of the former one.

One hears from certain sources of the hardships entailed on the natives in the making of the splendid roads, by means of which the British administration is opening up their tropical and luxuriant "bush" district. No one, however, is quicker than the natives themselves to see the advantages to be gained from such improved means of communication, whether as regards personal safety or trading facilities. On several occasions towns have offered, of their own free will, to do more than had been asked of them. In some cases they have even made a new piece of road on their own initiative as a surprise for my next visit to their part of the country.

Another point often raised by those who have no practical experience of natives is the hardship entailed on the latter by engaging them as carriers. Perhaps I may mention here that it is a usual thing for bands of men to come in from a distance of 40 to 50 miles, a month beforehand, in order to make sure of being taken on as carriers for the next bush tour.

OUR IMMIGRATION LAWS FROM THE VIEWPOINT OF NATIONAL EUGENICS

By Prof. Robert DeC. Ward, of Harvard University

HOW far do our present immigration laws enable us to exclude those aliens who are physically, mentally, and morally undesirable for parenthood; those whose coming here will tend to produce an inferior rather than a superior American race; those who, in other words, are eugenically unfit for race culture? We, in the United States, have an opportunity which is unique in history for the practice of eugenic principles. Our country was founded and developed by picked men and women, and today, by selecting our immigrants through proper legislation, we have the power to pick out the best specimens of each race to be the parents of our future citizens.

The social responsibility which rests upon this country in this matter is overwhelming. We may decide upon what merits—physical, intellectual, or moral—the fathers and mothers of American children shall be selected; but we have left the choice almost altogether to the selfish interests, which do not care whether we want the immigrants they bring, or whether the immigrants will

be the better for coming. Steamship agents and brokers all over Europe and eastern Asia are today deciding for us the character of the American race of the future.

It is no argument against practicing eugenic ideas, in the selection of our alien immigrants, to say that the New England country towns are full of hopelessly degenerate native Americans, who are inferior, mentally, morally, physically, to the sturdy peasants of Europe. The degeneracy of our country native stock is probably chiefly due to the drawing off of the stronger and more capable men and women to the cities; to prolonged inbreeding, and to the continued reproduction of feeble-mindedness, which is rife in many of our country districts. It will not help to reduce the number of our native degenerates if we admit alien degenerates. National eugenics, for us, means the prevention of the breeding of the unfit native, as well as the prevention of the immigration and of the breeding after admission of the unfit alien.

CAREFUL ABOUT IMPORTING CATTLE, CARELESS ABOUT IMPORTING MAN

Should we not exercise at least the same care in admitting human beings that we are now exercising in relation to animals, to insect pests, or to disease germs? Yet it is actually true that we are today taking more pains to see that a Hereford bull or a Southdown ewe, imported for the improvement of our cattle, are sound and free from disease than we take in the admission of an alien man or woman who will be the father and mother of American children. We do not hesitate to prohibit the importation of cattle from a foreign country where a serious cattle disease is prevalent. It is only in very extreme cases, indeed, that we have ever taken such a step in connection with the importation of aliens. Yet there are certain parts of Europe from which no aliens should be allowed to enter this country, for reasons which are eugenically of the first importance.

Our present laws aim to exclude some twenty-one classes of mentally, physically, morally, and economically undesirable aliens. On paper the list of the excluded classes is long and formidable, and seems more than sufficient to accomplish our eugenic purposes; but the fact is that careful and unprejudiced students of immigration agree that these laws do not keep out the unfit so as to preserve the *status quo*, to say nothing of promoting eugenic improvement. We already have an army of probably not less than 150,000 feeble-minded in the United States, of whom only about 10 per cent are in institutions, the rest being free to propagate their kind. And of those in institutions, the large proportion are kept there only temporarily, being at liberty for much of the time during their reproduction period.

The same is true of thousands of criminals, whom we shut up for varying periods of time, but allow, in the intervals when they are out of prison, to populate the world with children, much of whose inheritance is criminal. We are today legalizing the begetting of criminal children by failing to give permanent custodial care to habitual criminals.

Further, there are over 150,000 insane in the institutions of the United States alone, and of these many have already left offspring to perpetuate their insanity. In spite of this appalling situation—appalling from the standpoint of mere sentiment and of mere philanthropy—doubly appalling from the standpoint of eugenics, we have been admitting alien insane and alien imbeciles, and alien epileptics and alien criminals, partly because of a lax administration of the law under former administrations, partly because the law is incapable, under existing conditions, of effective enforcement. The disproportionate increase of alien insane, of alien imbeciles, of alien criminals, and many other facts which may be ascertained by any person who is interested in this question, shows that, as just stated, our immigration laws do not now enable us to preserve the *status quo*.

Sir Francis Galton has clearly shown that "each married degenerate produces on the average one child who is as degenerate as himself or herself, and others in whom the taint is latent, but liable to appear in a succeeding generation."

XUM

Further, it is well known that imbeciles have larger families than normal persons, and that they also have a large number of illegitimate children. Parenthood on the part of all these classes of persons, native or alien, is a crime against the future. To admit to this country the feeble-minded, the insane, the epileptic, the habitual criminal, those afflicted with hereditary diseases, is no less a crime against the future.

The ideal selection of our immigrants would be possible only if we could have a fairly complete history, running back a few generations, showing the hereditary tendencies of each alien. This is impracticable, so far as the immediate future is concerned. But there are some things we can do. We can insist that each alien, on landing here, should undergo a very thorough mental and physical examination at the hands of our Public Health and Marine Hospital Service surgeons. These examinations would involve the stripping to the skin of each alien; the usual physical examination for physical defects; mental tests; tests for syphilis, and similar precautions. Is this too much to demand when the welfare of the human race is at stake?

I have seen thousands of aliens landed, and I have marveled at the skill with which our surgeons are now able, by the most superficial examination as the aliens file by, at the rate of several a minute, to detect some of the physical and even some of the mental defects which put these aliens into one or another of the classes which may be excluded. But such a superficial examination is all wrong.

It is nothing short of a crime to admit people, as often happens in a rush season, at the rate of 3,000, 4,000, or 5,000 in one day at Ellis Island. On April 11, 1910, 7,931 immigrants were inspected by the medical officers. Think of that! And these medical officers were supposed to detect any mental and physical defect which might exclude!

I believe that we ought to limit the number of aliens who shall be landed in one day to a certain number which could reasonably well be carefully inspected. We ought largely to increase the number of the surgeons detailed for that most important work of inspecting arriving aliens. We ought to enlarge the accommodations at some of our immigrant stations, in order that this work might be properly carried out.

Again, we can go a long way toward the accomplishment of our object by increasing the fines which the steamship companies now pay when they bring over an alien who is found, on our own examination here, to be an idiot, imbecile, epileptic, or suffering from a loathsome or dangerous contagious disease which could have been detected at the port of departure. The fine is now only $100. The steamship companies pay little attention to the provision. They run their chances of having such aliens detected on landing, and in some cases they insure themselves against possible loss by obliging the alien to deposit $100 when he buys his ticket. Now if we increased this fine to $500—and that is none too large—the steamship companies would themselves, without expense to us, make a much more thorough examination abroad before sailing.

Further, for the more effective detection of aliens who are physically, mentally, and morally undesirable, and who are already enumerated in our list of classes excluded by existing law, we should put immigrant inspectors and our own surgeons on board of all immigrant-carrying vessels. These officials, mingling with the immigrants on the voyage over, should see that they are properly treated and cared for; that they are not overcrowded, and that they receive adequate medical attention.

But, of far greater importance than that, these officials would be able to detect a great many cases of physical and of mental defect which we could not possibly detect in our necessarily hurried examination when these people land, and in this way we should be able to exclude and to send back far larger numbers of undesirable aliens than is at present possible, however strictly we may try to enforce the law.

In addition to these steps which we should take, and take instantly, to accomplish the more effective exclusion of the insane, the imbecile, the idiot, the tuberculous, and those afflicted with loathsome or dangerous contagious dis-

eases, we ought to amend our laws so that it will be possible to exclude more aliens of such low vitality and poor physique that they are eugenically undesirable for parenthood. The law of 1907 excludes persons "who are found to be and are certified by the examining surgeon as being mentally or physically defective, such mental or physical defect being of a nature which may affect the ability of such alien to earn a living." This clause has been found to be rather ineffective, partly because it has been taken to be an economic test and not a physical one; partly because of other provisions in the same act which largely nullify this section by making it possible to admit on bonds aliens who fall into the group here named.

Now aliens of such low vitality, poor physique, or suffering from such mental or physical defect that their ability to earn a living is thereby interfered with are, in the majority of cases, highly undesirable persons. They are not only themselves weaklings and unlikely to resist disease, but they are likely to have defective and degenerate children. Bonds will not prevent them from breeding.

We constantly speak of the need of more "hands" to do our labor. We forget that we are importing, not "hands" alone, but bodies, also. The vast majority of incoming alien immigrants are potential fathers and mothers, and the character of the race that is to be born depends upon the kind of alien bodies which we are allowing to have landed on our shores day by day. It is a tremendous responsibility which rests upon us.

Conservation of our natural resources: how much we hear about that. Conservation of American forests is important. So is conservation of American coal, and oil, and natural gas, and water supply, and fisheries. But the conservation and improvement of the American race is vastly more important than all other conservation. The real wealth of a nation is the quality of its people. Of what value are endless acres of forests, millions of tons of coal, and billions of gallons of water if the race is not virile, and sane, and sound?

Fearfully misguided has been most of our so-called philanthropy. We have housed and clothed and fed the defective, the degenerate, the delinquent, to such an extent that we have encouraged them to reproduce their kind in ever-growing numbers. We have spent increasing sums for asylums, almshouses, prisons, and hospitals, in which we have temporarily confined the insane, the pauper, the habitual criminal, the imbecile, leaving them free, during most of their lives, to propagate their kind. It is a fact, disguise it as we will, that we have taxed ourselves to support institutions which have resulted in increasing and not decreasing the number of the unfit.

We have before us an immediate duty of tremendous importance in caring for our own unfit; in seeing to it, by adequate legislation, that the insane, the habitual criminal, the feeble-minded, and similar classes are permanently segregated, so that they cannot reproduce their kind to be a further burden upon the nation, and in enacting laws which shall prevent the marriage of those whose offspring will be unfit.

But, in addition to our own very heavy burden of those who are defective or degenerate, we are adding every year, by immigration, many hundreds if not thousands of aliens whose presence here will inevitably result, because of their own defects or those of their offspring, in lowering the physical and mental and moral standards of the American race.

Biologists admit that they have much to learn about heredity. But of some things we are already sure. Enough is known to make it absolutely essential, if the quality of the American race is to be preserved, that there should be a far more careful selection of our incoming alien immigrants, on eugenic grounds, than we have ever attempted.

The need is imperative for applying eugenic principles in much of our legislation. But the greatest, the most logical, the most effective step that we can take is to begin with a proper eugenic selection of the incoming alien millions. If we, in our generation, take these steps, we shall earn the gratitude of millions of those who will come after us, for we shall have begun the real conservation of the American race.

XUM

VIEW OF CONSTANTINOPLE: THE NATURAL ADVANTAGES OF ITS SITE MAKE IT THE QUEEN CITY OF EUROPE

THE YOUNG TURK *

By Rear-Admiral Colby M. Chester, U. S. Navy

DURING the better part of the past four years I have resided in Constantinople, making trips to the interior of Turkey, the islands of the Ægean Sea, Egypt, and several of the lost colonies of the Empire.

I have dined in the palace of that arch-fiend the recent noted ruler of the Turkish Empire, Abdul Hamid; also in some of the homes of prominent Turks, and I feel warranted, therefore, in speaking of them from the standpoint of one who has known them at close range.

During the early part of the year 1908 the growing discontent with the existing régime in the Ottoman Empire on the part of all the different races of this very cosmopolitan country—Turks, Greeks, Armenians, Bulgarians, and Arabs—aroused a cry of distress that was heard throughout all christendom. From outside the boundaries of Turkey, among the western nations of Europe, Christian people pressed their administrators for a declaration that should either put an end to the despotic rule of Abdul Hamid—the Nero of the age—or drive the Turk out of Europe.

Suddenly from Saloniki, in the south of Macedonia, Enver Bey and Niazi Bey, two young Turkish army officers of never-dying fame, raised the standard of revolution, and a wave of reform was started from within the Empire itself that spread from border to border with lightning rapidity.

It was on July 4, 1908, the birthday of the United States of America and of republican government, that a new era was inaugurated in Turkey. It took a number of days to organize the rebellious subjects of the Sultan, after these young officers had lighted the fuse which was eventually to blow this despotic ruler from his throne; so that it was not until an ultimatum wired to Constantinople demanding the proclamation of the constitution was received and acted upon that it was finally granted to the people.

On July 24, however, Abdul Hamid, learning that his last remaining support, the Albanian troops, whom he had for many years bribed to sustain his tottering power, had deserted him, and that the threat to march on Constantinople with 200,000 men was to be literally carried into effect, submitted to the inevitable and signed the *iradé* that was to make him a figure-head in governmental administration.

WHO ARE THE YOUNG TURKS?

The term "Young Turk" is applied to that vast class of Moslem subjects who were disaffected by the growing burdens placed upon them by the despotic action of the ruling power. This term applies alike to young and old, male or female; those who lived in Turkey or were spread broadcast over the face of the earth by expatriation or the fear of death by residence in the fatherland. This so-called Young Turk party comprised Christians and Jews, as well as Turks, and embraced parts of all the various races which go to make up the nation.

The "Committee of Union and Progress" was a secret society organized within the kingdom, the ranks of which were recruited from the Young Turk party. Members were obliged to take a most sacred oath to devote their whole energies to the redemption of the country, to obey every order given through the channels of the society, never to reveal its secrets, and to kill any person, however near and dear to them, whom the committee might condemn to suffer death. The harshness of this creed was due to the necessity of fighting with fire the devil who ruled the nation, and who had organized the most diabolical espionage system ever conceived—a system that created suspicion between man and wife, brother and sister, or even mother

* An address to the National Geographic Society, December 8, 1911.

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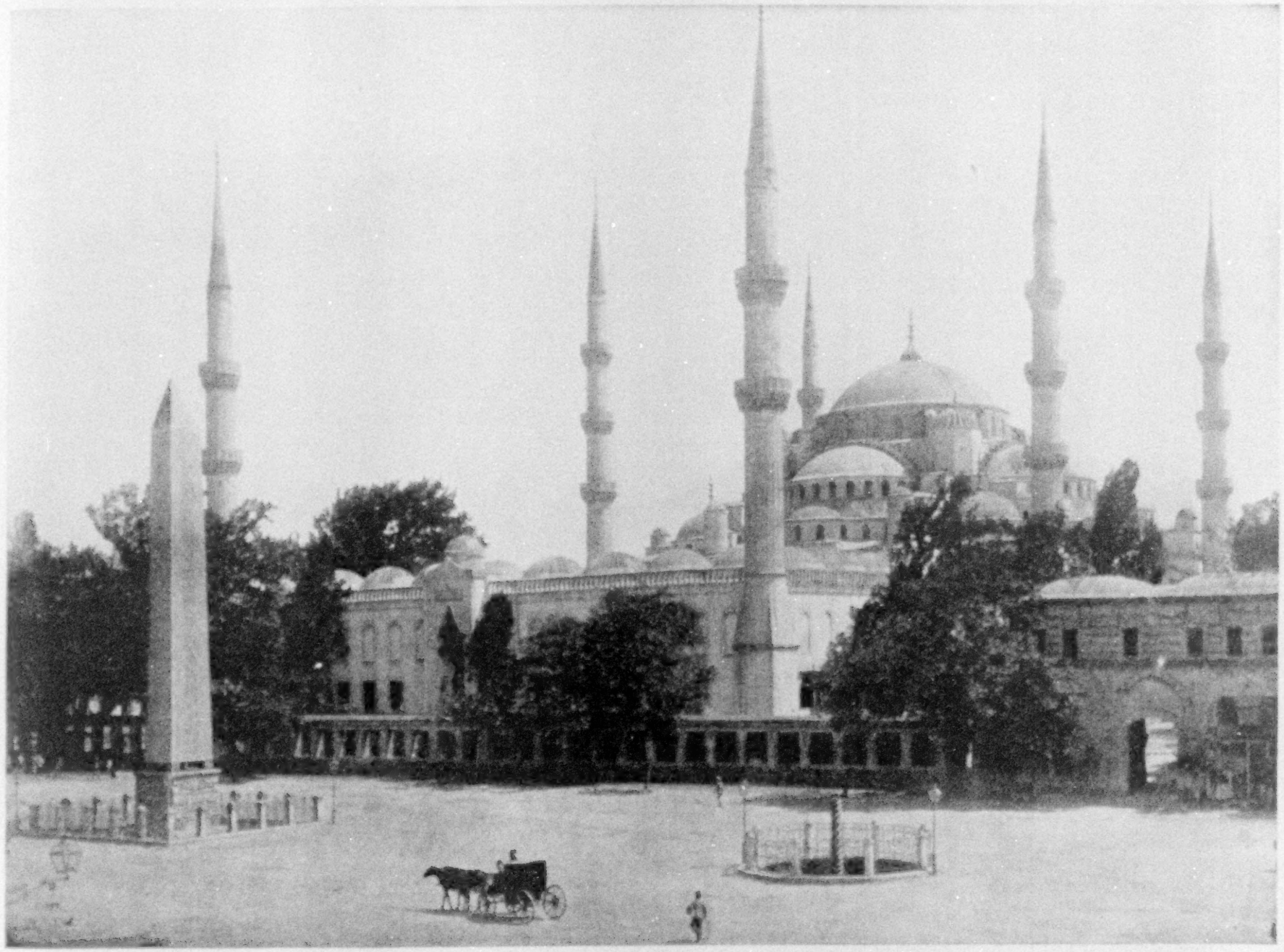
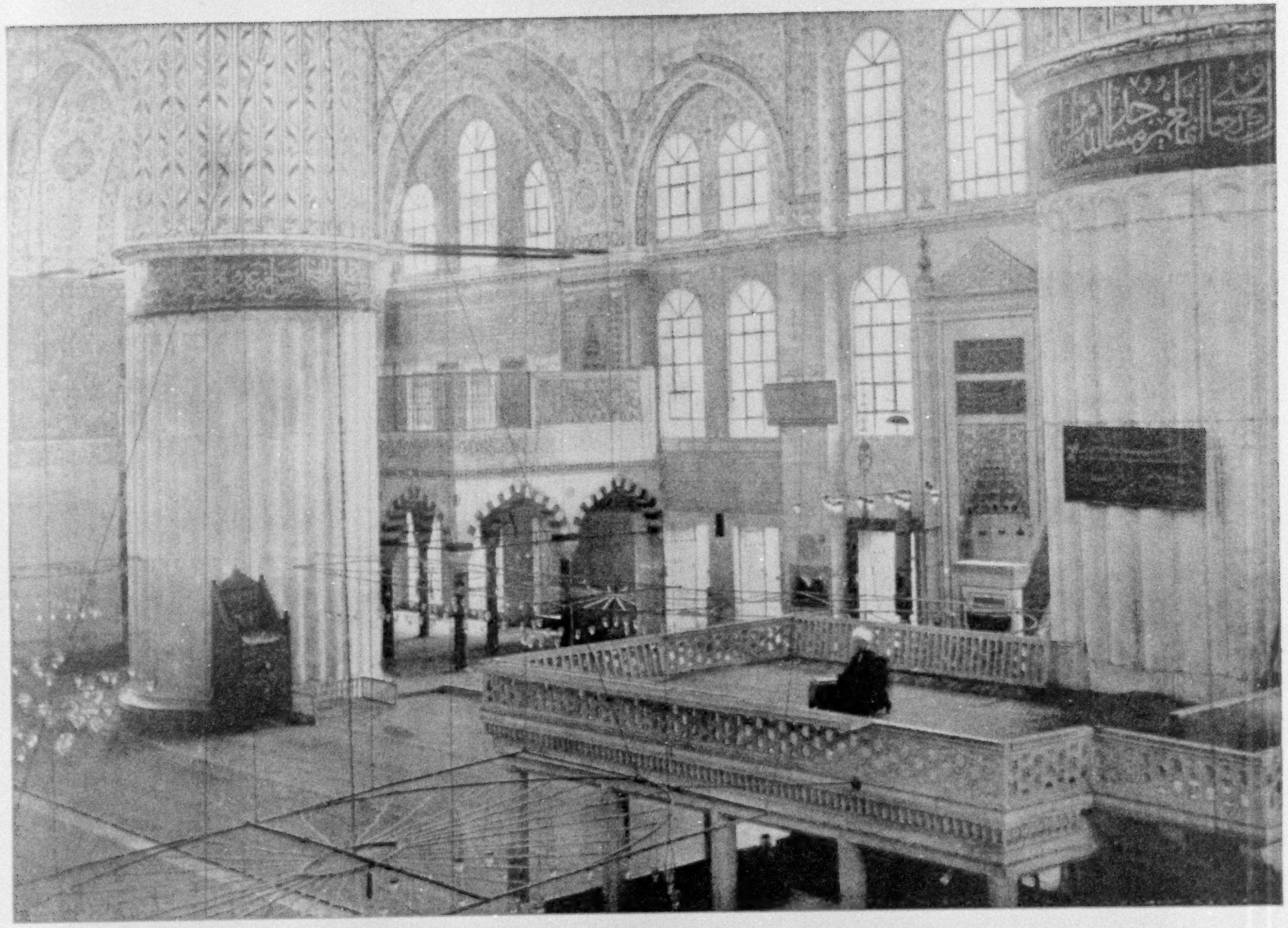


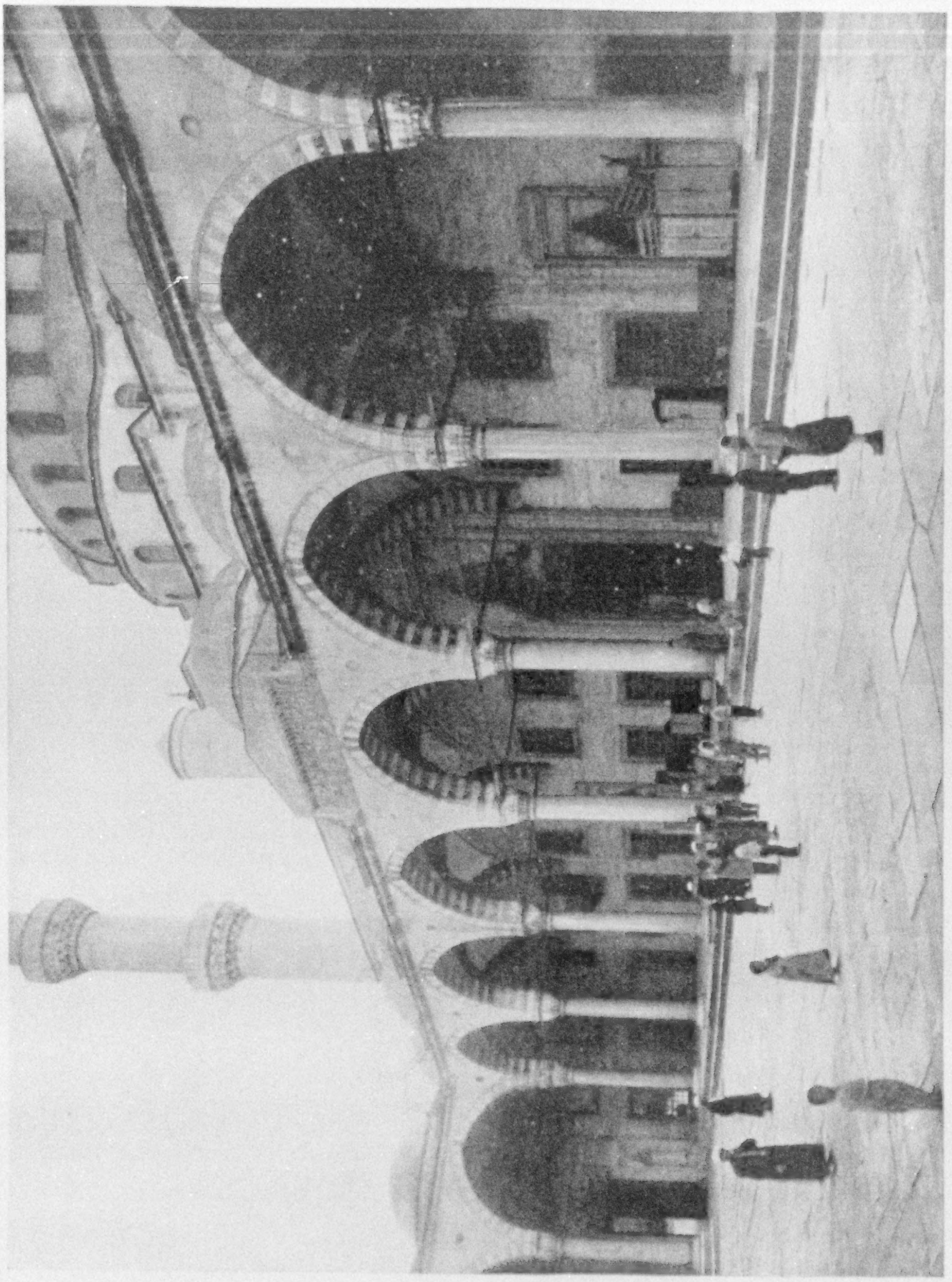
MOSQUE OF SULTAN ACHMET I AT CONSTANTINOPLE

The only mosque, except the Kaaba at Mecca, possessing six minarets. Note the spiral column enclosed with a rail in the right foreground. This is the famous "Serpent of Delphi," consisting of three brass serpents twined around each other, and one of the most historic monuments in existence. It was constructed by the Greeks who defeated the Persian hordes at Platæa (479 B. C.), and dedicated to Apollo at Delphi. Upon it are inscribed the names of the immortal Greek cities that drove the Persians out of Europe. It was brought from Delphi to Constantinople by Constantine, who ransacked the world for treasures and trophies with which to decorate his new capital.



INTERIOR OF THE MOSQUE OF SULTAN ACHMET I, THE MOST BEAUTIFUL MOSQUES IN CONSTANTINOPLE

"The mosques are the noblest, worthiest monuments of the Ottomans. With a care which they have never expended on kiosk or palace, and with an art which found in such constructions its deepest inspiration and loftiest destiny, they have sought to make their mosques as sublime and lasting as the human mind could devise and the human hand could execute. Like the classic Greeks, they have consecrated their best to the service of their faith."—Edwin A. Grosvenor in "Constantinople."



INTERIOR COURT OF THE MOSQUE OF SULTAN ACHMET I

At the feasts which follow the Mohammedan Ramazan (or fasting) the courts of this grand mosque are thronged with thousands of children

and child, lest an indiscreet word should bring death from the edict of the despot whose bloody sword was ever suspended over his trembling subjects.

No member of this committee was ever permitted to know more than four others. Five was the maximum number allowed to meet together in a single group; but the secret chain leading up to the central figure or group, which was all supreme, was so carefully concealed that no one to this day has been able to discover the ultimate source of that wonderful power.

No one who has not been an eyewitness to the effect of both the old and new régimes in Turkey upon its people can realize the change that now took place.

RETURN OF THE EXILES

The announcement that constitutional government had been granted to Turkey soon spread to all parts of the world; aged exiles and those who had fled from the dread machinations of Abdul Hamid returned and filled the capital to its utmost capacity; and as they were all members of the Young Turk party, the power that this remarkable secret organization wielded over the people became the prime factor in the administration of the government.

The people of the nation, who were at first stunned by the suddenness of the change, began to shout the new word "liberty," which had just entered their vocabulary, with all the changes that could be played upon it, and in every quarter of the Empire celebrations took place, the inhabitants simply going wild with joy for their deliverance from slavery.

Addresses were made by Mohammedan and Christian speakers in streets, in squares, in mosques, and in churches. Fraternity became for the first time the sentiment which seemed to bind all creeds, races, and tongues together in harmonious accord. Moslem and Christian leaders embraced and kissed each other in public, while tears rolled down the cheeks of thousands as they took part in the festivities.

Burial services were performed for the Armenian martyrs of 1896, which were taken part in by Mohammedans and Christians alike. Crowds of former conflicting religious sects formed vast parades, led by their priests; and, although the followers of Islam greatly exceeded all other sects in numbers, Christian fathers were invariably given the seat of honor in the carriages which accompanied them.

All looked to the Committee of Union and Progress for guidance, and these men worked with great circumspection. Abdul Hamid was distinctly told that as long as he ruled according to the constitution his life would be spared, but that he would be held to a strict accountability for his actions. He was, nevertheless, promptly put under surveillance to insure his good behavior. Naval vessels, which had been left to rot in the port, because this wily ruler feared that some one might do as he had done with the fleet, in making it the means to drive his own brother off the throne of Turkey, were put in commission and moved to an anchorage in the Bosphorus, where the guns bore directly on Yildiz, and thus the Sultan became practically a prisoner in his own palace.

PROMINENT PART PERFORMED BY AMERICANS

Americans little realize what an important influence their countrymen and countrywomen have exerted in bringing about constitutional government in Turkey. Talcott Williams, LL.D., in an address in Brooklyn, N. Y., October 15, 1908, stated: "Many causes have combined, many factors are present, many influences have turned the hearts of men in that Empire; but, if we ask ourselves what the governing and final factor is which has brought about the first of the world's bloodless revolutions, which has seen a people divided and dissevered by creed, by race, by language, by every conceivable difference which can separate the sons and daughters of men, suddenly act together, we do ill if we forget that for 80 years the American missionaries have been laying the foundations and preaching the doctrine which makes free government possible."

DANCE OF WHIRLING DERVISHES: CONSTANTINOPLE

"Each revolves not only upon himself, but around all the rest. Circle swings in intricate circle, and the relative position of each is in constant change throughout the hall. The long white robes, hanging to the feet, slowly distend by the rapid motion, and at last stand at right angles to the wearer. Yet, though the space is small and the participants are many, never does robe graze robe, nor hand collide with hand. . . . The pallid faces of the zealots seem transformed. On many a countenance dawns an expression of ecstasy, and all seem moving as if in a delicious dream. So the living labyrinth glides on for eighty or ninety minutes."—Edwin A. Grosvenor.

INTERIOR OF THE TURBEH, OR MAUSOLEUM, ATTACHED TO THE MOSQUE OF YENI VALIDEH DJAMI (SEE PAGE 51)

The turbeh contains 56 catafalques of sultans, sultanas, and their children

THE DOVE MOSQUE, OR THE MOSQUE OF SULTAN BAYAZED II

It is called the Dove Mosque because of the thousands of doves that brood in every nook and cranny of the mosque. All these doves, tradition states, are descended from a single pair which a poor widow contributed while the mosque was building. As the Sultan Bayazed, the builder of the mosque, notoriously stinted his architect, while the widow gave her all, the doctors of Mussulman theology declare that her humble name, and not the Sultan's, shines in heaven as that of the real founder.

THE SPLENDID MOSQUE OF YENI VALIDEH DJAMI, "THE MOST ELEGANT MOSQUE WHICH EXISTS AT CONSTANTINOPLE"

It is built of white marble. Its interior is profusely decorated with intricate mosaics, mother of pearl, and precious tiles. "The scores of columns which sustain the galleries within were brought from the plain of Troy, and may have once been set up in temples named by Homer. One column, of such peculiar rose as is rarely seen, was brought as a trophy from Crete, in 1645, by the victorious Kapoudan Pasha Yousouf. This pasha was counted the handsomest man of his time. His beauty and the roseate marble could not save him; or, rather, they caused his death. A jealous rival accused him of having brought a worthless colored stone to the Sultan, while keeping a column of solid gold for himself. The luckless admiral was speedily deposed from office, and shortly sent to execution."—Edwin A. Grosvenor, in "Constantinople."

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GUARD AT THE IMPERIAL BANK: CONSTANTINOPLE

The great educational system founded by these Americans comprises at present more than 300 common schools in the Empire, 44 high schools, 8 colleges, 1 normal school, and 5 divinity schools. This scholastic work is spread out all over this former "garden spot of the world," and has leavened the masses with high ideals of living, knowledge of free institutions, and longings for better government.

Such an authority as Gladstone has placed upon record a statement that "American missionaries in Turkey have done more good to the inhabitants of that country than has all Europe combined. And Mr. James Bryce, the British Ambassador to Washington, goes even further, and states: "I cannot mention the American missionaries without a tribute to the admirable work they have done. They have been the only good influence that has worked from abroad upon the Turkish Empire."

THE "UNSPEAKABLE TURK" NO LONGER EXISTS

It should not be forgotten that Turkey of today is not the Turkey depicted in our child's history, nor is it in fact the same country that it was three years ago. The people of Turkey as a body have long since passed from the pale of the "unspeakable Turk," and many of them stand out as the peers of any people in the world in general intelligence, character, and all the qualities that go to make good citizens; but of course as yet they are wanting in sufficient experience to guide without assistance the ship of state to the high plane at which they are aiming. This experience they are fast acquiring, and are already as far advanced in the practices of government by the people as were those of the United States at the end of the first decade in our history, having had our example to guide them.

During my stay among these people I have found men of sterling character and unswerving integrity—men well fitted to lead their country through crises similar to those through which our own nation passed in its struggle for birth.

While we Americans have done much toward the enlightenment of the Turk, I should say in all fairness to them that they have earnestly sought education through following the precepts of the Koran (their Bible), in which is combined the tenets of both religion and legislation. A short selection from this book, so often misinterpreted, will illustrate its teachings. It reads:

> "The duty of every Mussulman is to acquire science.
> Science is the life of the heart.
> The learned shine in the world like stars in the sky.
> Knowledge is the immortal soul of man."

THE TURKS ARE APT SCHOLARS

And that the Turks are apt scholars no one can doubt who has lived among them. One of the younger classmen of the Beirut American University presented me, when I was last there, with a copy of a speech made by Dr. Bliss, its president, on the responsibilities of popular government, which this young student had taken down stenographically and typewritten himself. This young man, a Syrian by birth, spoke English well, and more than a dozen other languages. Yet he was but an average scholar in the college.

At Constantinople on more than one occasion I have witnessed the presentation of some of Shakespeare's plays by the young women of the American College for Girls that would compare favorably with any similar representation in our own country. Many of the girls who took part in the plays were but 16 or 17 years of age, and had not studied the English language, in which the dramas were given, more than one year. There was no self-consciousness or stage fright among these girls, because they were actuated by a common desire to acquit themselves well without any regard to the effect made upon others.

The Turkish people are reaching out to other civilizations for help to recover from the tyranny and stagnation that has bound them so long in slavery. They look to America particularly as the one nation of the West that has no political ambition to subserve in its action toward

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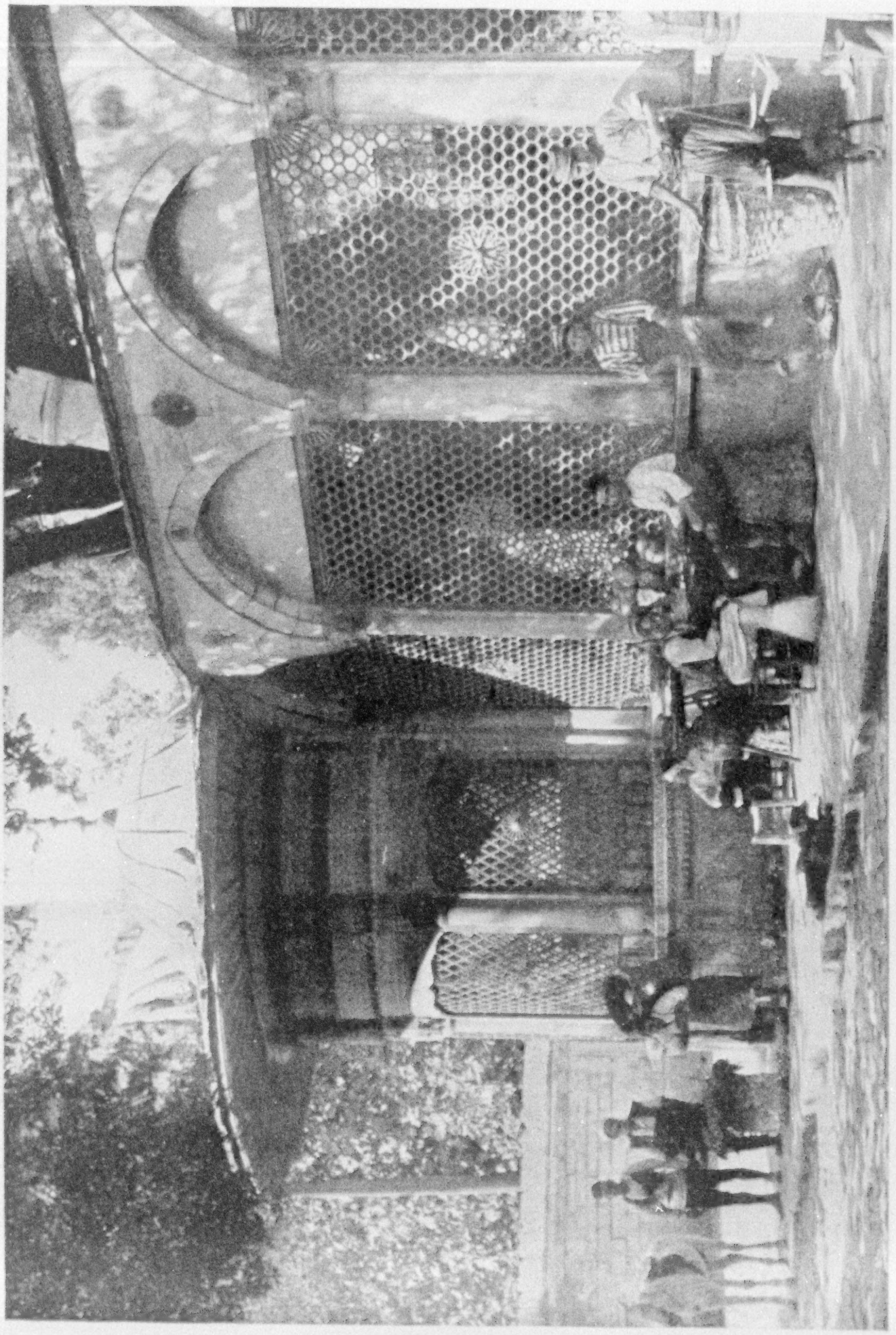
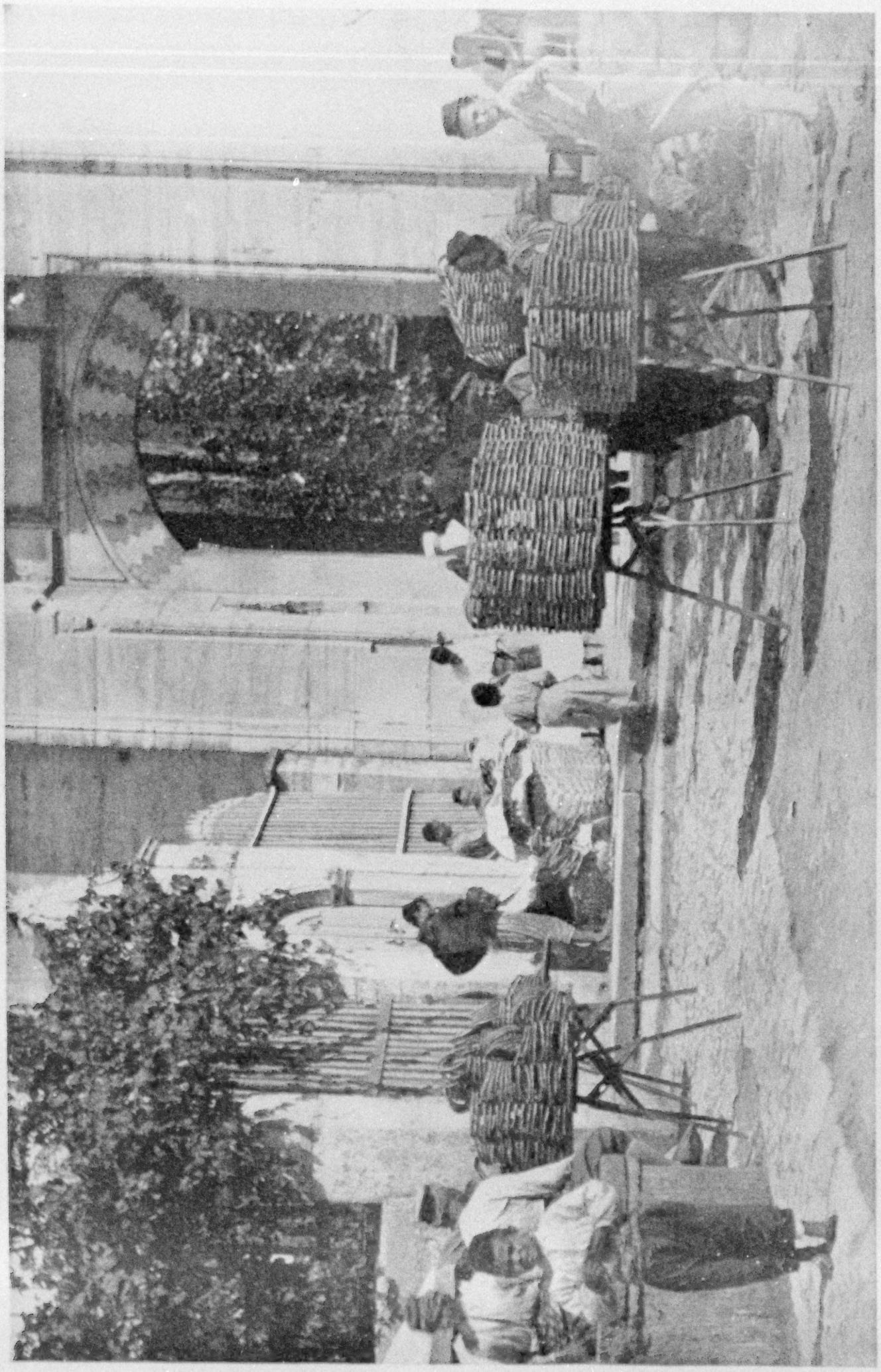


SELLERS OF VEGETABLES: CONSTANTINOPLE

Note the man on the left with a basket full of melons on his back. The man next to him has a basket of grapes



SELLERS OF "SIMITS"; CONSTANTINOPLE

The round hoops or rings (simits) with which the stands are loaded resemble "pretzels." They are made of flour and water and are very popular among all classes

A SCENE IN THE GREAT TURKISH CEMETERY IN SCUTARI, ON THE BOSPORUS, PROBABLY THE VASTEST MUSSULMAN CEMETERY IN THE WORLD

The wilderness of tombs and the thousands of tall, motionless, funereal cypress trees make this cemetery one of the most impressive sights in the East

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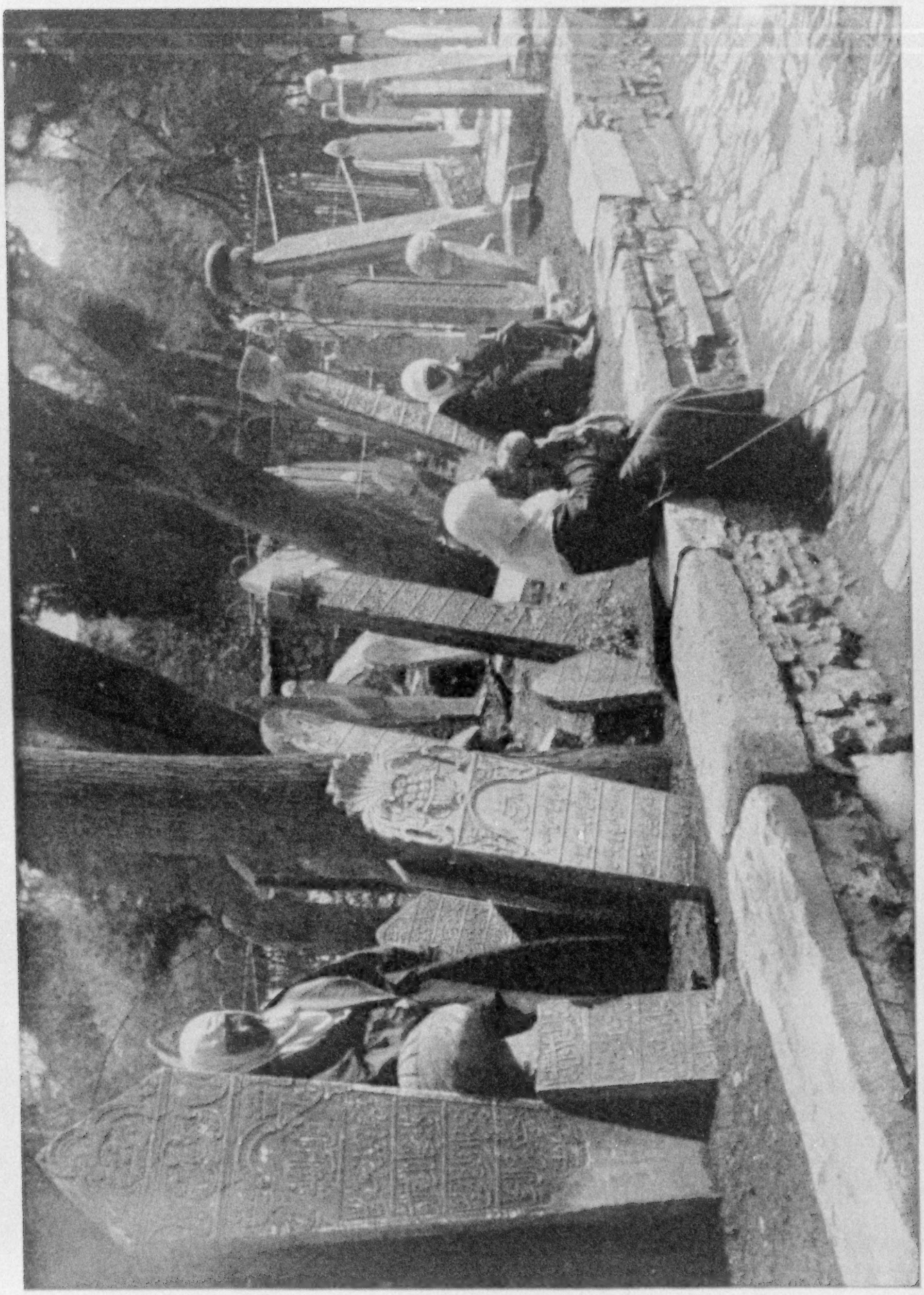
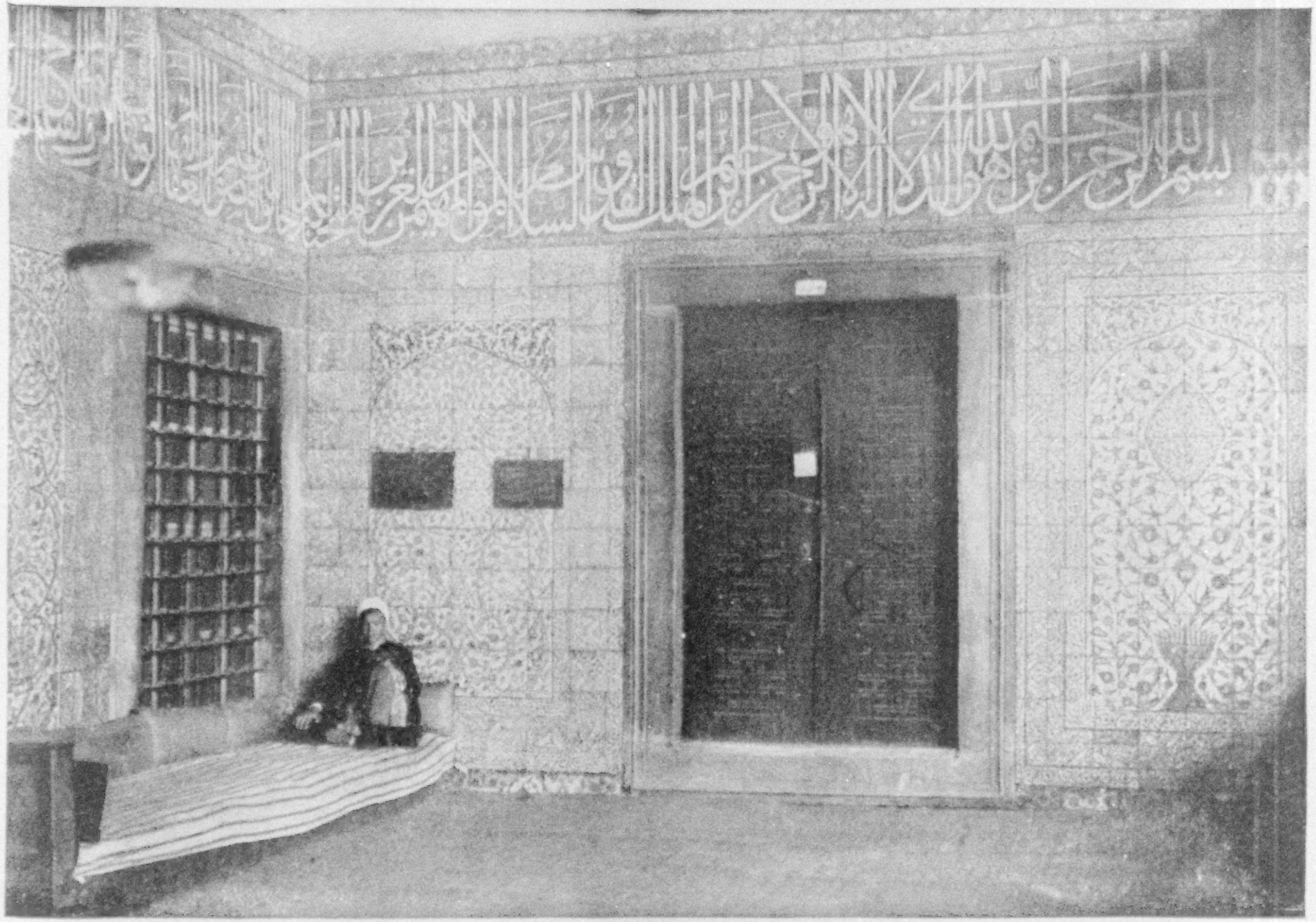


ANOTHER SCENE IN THE TURKISH CEMETERY OF SCUTARI, ON THE BOSPORUS



A CORNER IN THE TURBEH, OR MAUSOLEUM, OF YENI VALIDEH DJAMI: NOTE THE RICH AND ELABORATE DECORATION, SO CHARACTERISTIC OF OTTOMAN ARCHITECTURE (SEE PAGES 49 AND 51)

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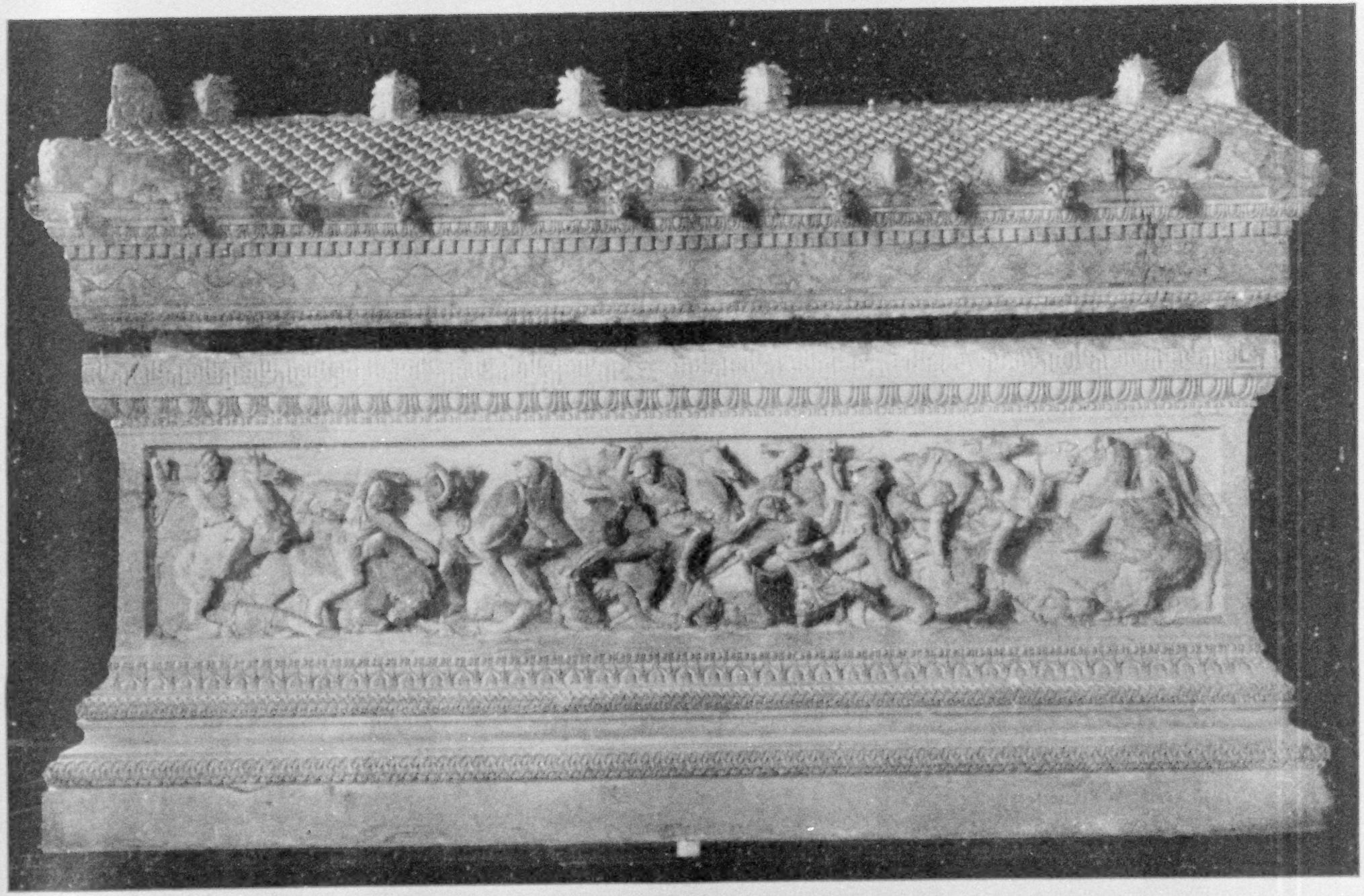
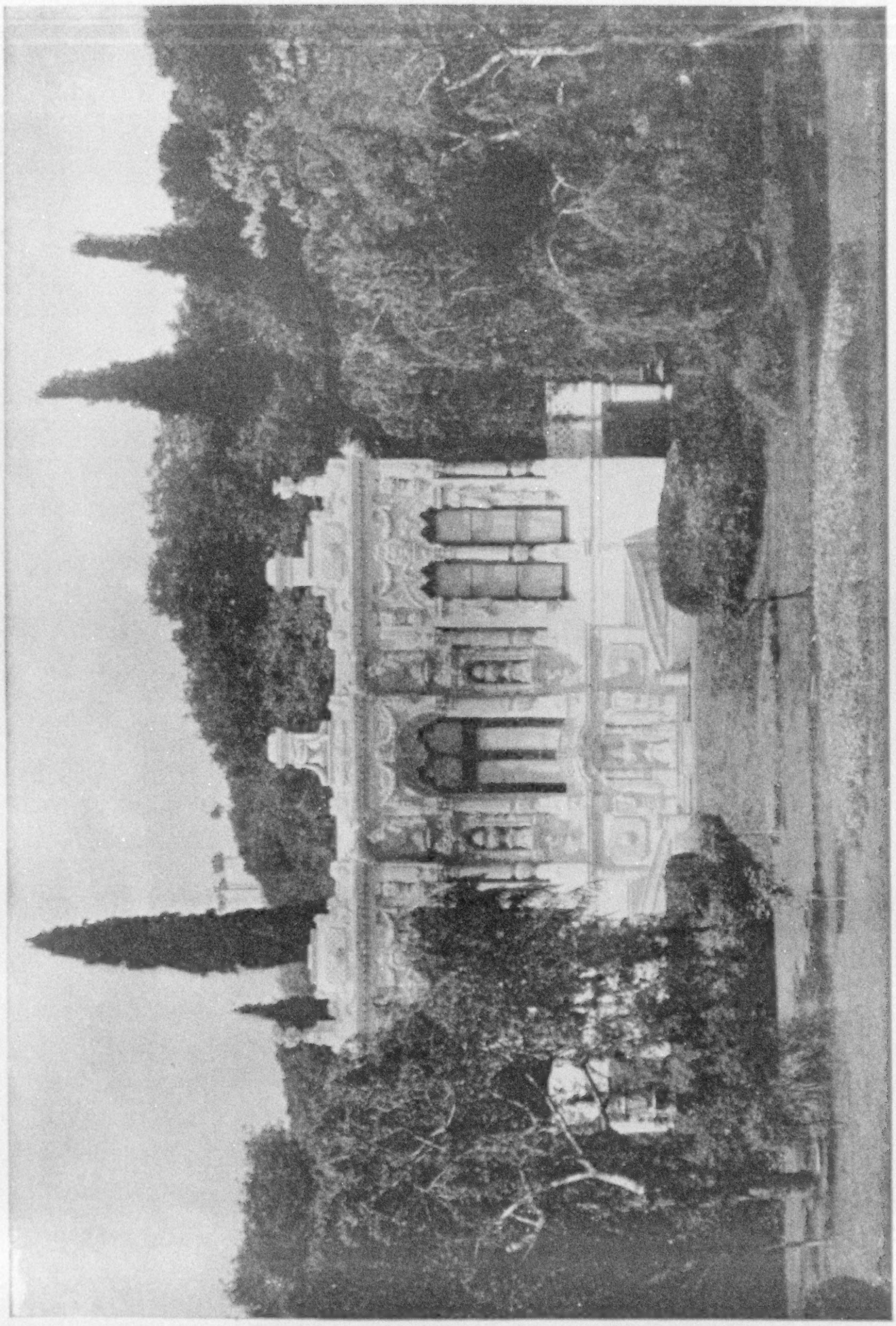


TOMB OF ALEXANDER THE GREAT, NOW IN THE MUSEUM AT CONSTANTINOPLE

It was discovered at Sidon by an American missionary, Dr. Eddy, many years ago. The Ottoman Empire is an exhaustless mine for the archæologist, as it was the seat of the Minoan, Chaldean, Hittite, Assyrian, Babylonian, and Hebrew empires



THE SULTAN'S RETREAT

them, and we should help them to work out their natural destiny for which we have already helped lay the foundation.

Sir William Ramsay has said: "Constantinople is the center about which the world's history revolves. It is the bridge that binds the East to the West, the old to the new civilization, which must be brought into harmony before the culmination of all civilization can appear, bringing 'Peace on earth and good-will toward men.'"

Sir William also says, in derogation of his own people: "The heated struggle between the English and Germans for influence in Constantinople has much impeded the establishment of peace and order in Turkey." Nothing truer has been said of the "near eastern question."

THE YOUNG TURKS HAVE ACCOMPLISHED MUCH

We have been told that the Young Turks have made a failure of constitutional government. Let us see how these abused people have acquitted themselves during the past three and one-half years, since the formation of democratic government in Turkey, as compared with the work of other nations.

A brief summary of the events occurring in this eventful epoch is necessary for a full understanding of the subject.

The storm of 1908 came so unexpectedly upon the political horizon of Europe that the powers were stunned for the moment. The sudden change of policy in the Turkish Empire, however, was too good an opportunity not to be taken advantage of, and on October 3, 1908, Austria-Hungary announced her annexation of the Turkish provinces, Bosnia and Herzegovina. This aggressive measure, being in absolute contravention of the Treaty of Berlin, made in 1878, at the end of the Russo-Turkish War, by the united powers of Europe, was the entering wedge for the despoliation of the Turkish Empire, which had long been threatened.

A mild protest was made to this act, as being a stab to the very heart of universal peace measures, in which the world at large was interested; but, as the leading protesting powers had been guilty of practically the same offense in times past, the effort to stay the act was without cohesion or force; and, as Austria-Hungary held the nine points of the law in her possession of the territory, over which that country had been granted suzerain powers under the Treaty of Berlin, and having, through an alliance with Germany, her great army at her back, the political conscience of the disgruntled parties was quickly healed by the bare hope of something good out of the wreckage coming to them.

Bulgaria now declared, and secured, her independence from Turkish rule, and thus the Empire was shorn of another considerable portion of its European territory. The Young Turks protested against this arbitrary move on the part of their now grown-up son, but the threatening attitude of the powers, coupled with a hope that this sacrifice would enable them to bind the remaining states of the Empire into a more cohesive union, led them to peaceably accept this declaration of Bulgaria's independence.

Russia, foreseeing no end to the carving of Turkey for other interests, thus begun, put in a claim for some of the spoils, which might have been hers but for the action of the "disinterested" powers in signing the Peace of Berlin.

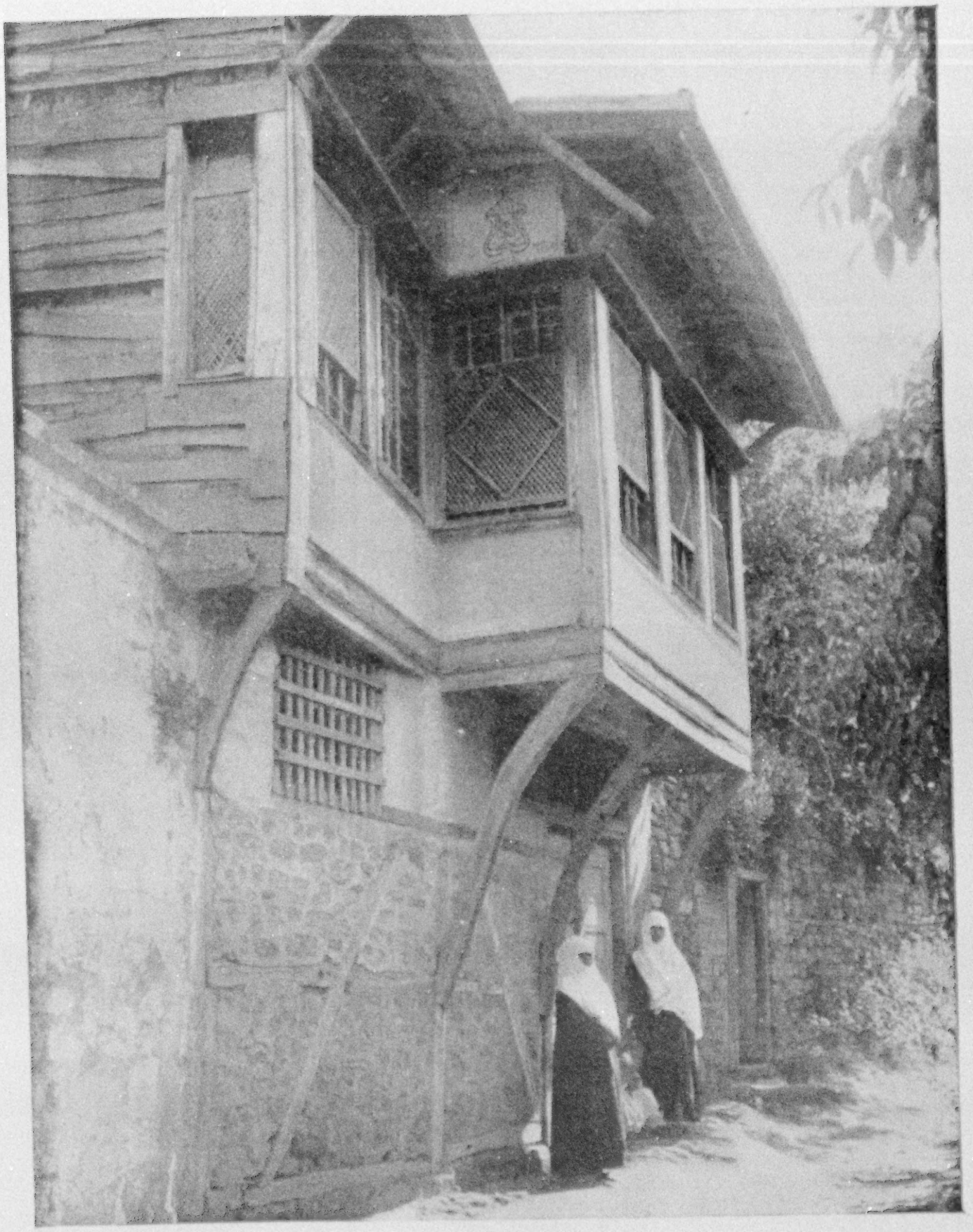
Greece then claimed the island of Crete, over which she had been granted and held suzerain powers for 30 years, on the identical ground put forward by Austria-Hungary upon taking Bosnia and Herzegovina.

The Young Turks now rose up in their might and vowed that Turkey would fight to the death any further attempt to despoil her of territory, and so strongly was this threat, which was practically an ultimatum, backed by the sentiment of the whole Moslem race, that England, fearing for the peace of Europe, used her influence to postpone action on the claims of Russia and Greece. She practically promised, however, that their claim should be favorably considered at an opportune time in the near future.

This stopped for a while aggressive measures against Turkish territory and permitted the Young Turk party to take

A TURKISH PEASANT

"It should not be forgotten that Turkey of today is not the Turkey depicted in our child's history, nor is it in fact the same country that it was three years ago. The people of Turkey as a body have long since passed from the pale of the 'unspeakable Turk,' and many of them stand out as the peers of any people in the world in general intelligence, character, and all the qualities that go to make good citizens; but of course as yet they are wanting in sufficient experience to guide without assistance the ship of state to the high plane at which they are aiming" (see page 53).



TURKISH HOUSE IN CONSTANTINOPLE

Those who would know something about the human side of Turkish women are recommended to read "Behind Turkish Lattices," by Hester D. Jenkins (J. B. Lippincott, publishers). Miss Jenkins was for ten years a teacher in the American College for Girls at Constantinople.

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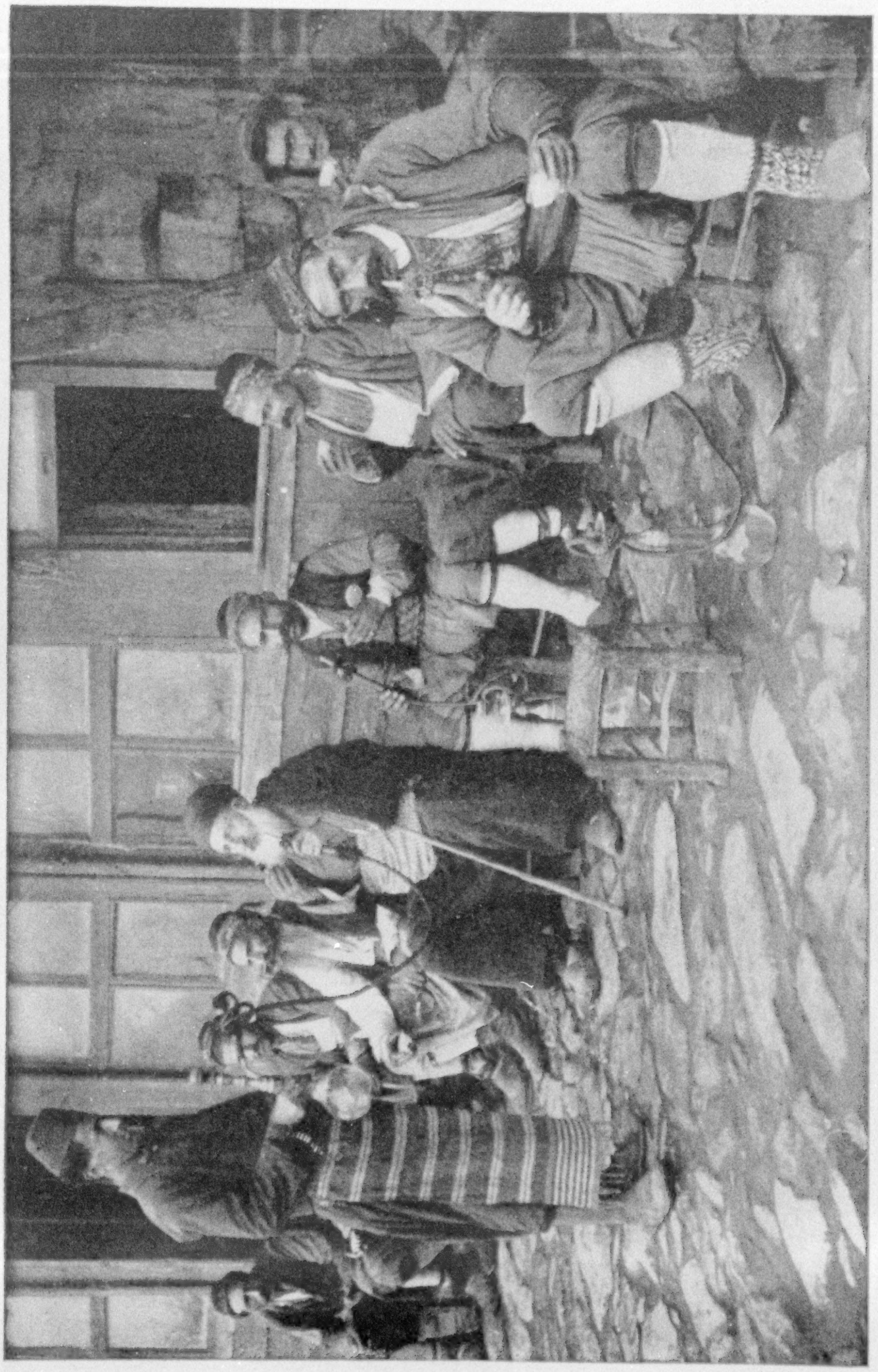

A TURKISH CAFÉ IN CONSTANTINOPLE; THESE MEN ARE PORTERS, OR HAMALS, WHO CARRY HUGE LOADS ON THEIR BACKS

up the prosecution of reforms, so urgently needed in the Empire.

A REVOLUTION SPEEDILY CRUSHED

But for a few months only was peace allowed to reign in the near East. From out of a clear sky, on April 13, 1909, burst a war cloud that threatened to throw the country back into anarchy. Abdul Hamid had, with his characteristic cunning and a liberal supply of money, taken advantage of a mild dissension among the delegates in Parliament which had met in December of the preceding year, to instigate a mutiny in the army and navy stationed at the capital against constitutional authority. At the same time he sent emissaries to the interior of the country to appeal to the religious fanaticism of the poorer classes, and inaugurated a racial warfare between the Turks and Armenians that at once put constitutional government in jeopardy. It was evident that Abdul Hamid's main purpose in bringing about intestine strife was to show the powers that Turkey could only be ruled by his strong right arm and that he alone could put a stop to the conflict.

So near to success did he come in his nefarious aim that on April 24 the *London Times* published an article to the effect that constitutional government was dead, and that England should at once recognize Abdul Hamid as the supreme ruler of the land.

This conviction was so general among foreigners that a commission from Parliament was prevailed upon to warn the commander-in-chief of the Macedonian army, Mohammed Shefket Pasha, whose troops were then marching on the capital, that if his army entered the city it would bring about a massacre of Christians, and then would follow European intervention. "Go back," said this Oliver Cromwell of his country to the parliamentary committee sent to communicate this information, "and attend to your parliamentary duties. There is no power under heaven that can keep my army out of the city." And so it proved.

All military authorities unite in saying that the taking of Constantinople by the constitutional army, April 26, 1909, was one of the most brilliant and successful campaigns in history. It is not necessary to describe it here; but, as far as the safety of Christians, the bugbear of Turkey's foes, is concerned, I can state that ladies of my party traversed the streets of Constantinople while the conflict was raging with as little danger and less fear than they would have had in crossing Broadway, in New York city, during an election day excitement.

The spectacle of Shefket Pasha's grand army of 30,000 as fine a body of men as ever crossed a parade ground, augmented by a contingent of volunteers, containing among the private soldiers peers of the realm and officers of high rank, both of the army and the navy, for whom there were not suitable commands, taking possession of Constantinople was an inspiration long to be remembered. It was an evidence of patriotism rarely seen elsewhere, and which bodes ill for the enemies of such a people.

The greatest factor in this example of discipline was the absence of intoxicating liquors among both officers and men, and we could but contrast it with the stories of other battles in the east between Mohammedan and Christian troops, where a barrel of whiskey was regarded by the former as an equivalent to a reinforcement of one hundred men, for by rolling the barrel of whiskey before an advance guard of the enemy it was sure to be greedily attacked, to the advantage of the abstemious Turk.

This counter revolution in Turkey, which Shefket Pasha did everything in his power to make as "bloodless" as was the revolution of 1908, was so quickly and completely suppressed that constitutional government was placed upon a higher and firmer basis than before, and on the day the *London Times* (to which I have referred) was read in Constantinople, Abdul Hamid was the nation's prisoner, never again to use his weapons of bloody intrigue. His impeachment was done in strict accordance with the constitution and the religious law of the land, and his shameful reign came to a final ending by the selection of his illustrious successor, Mohammed V, who had

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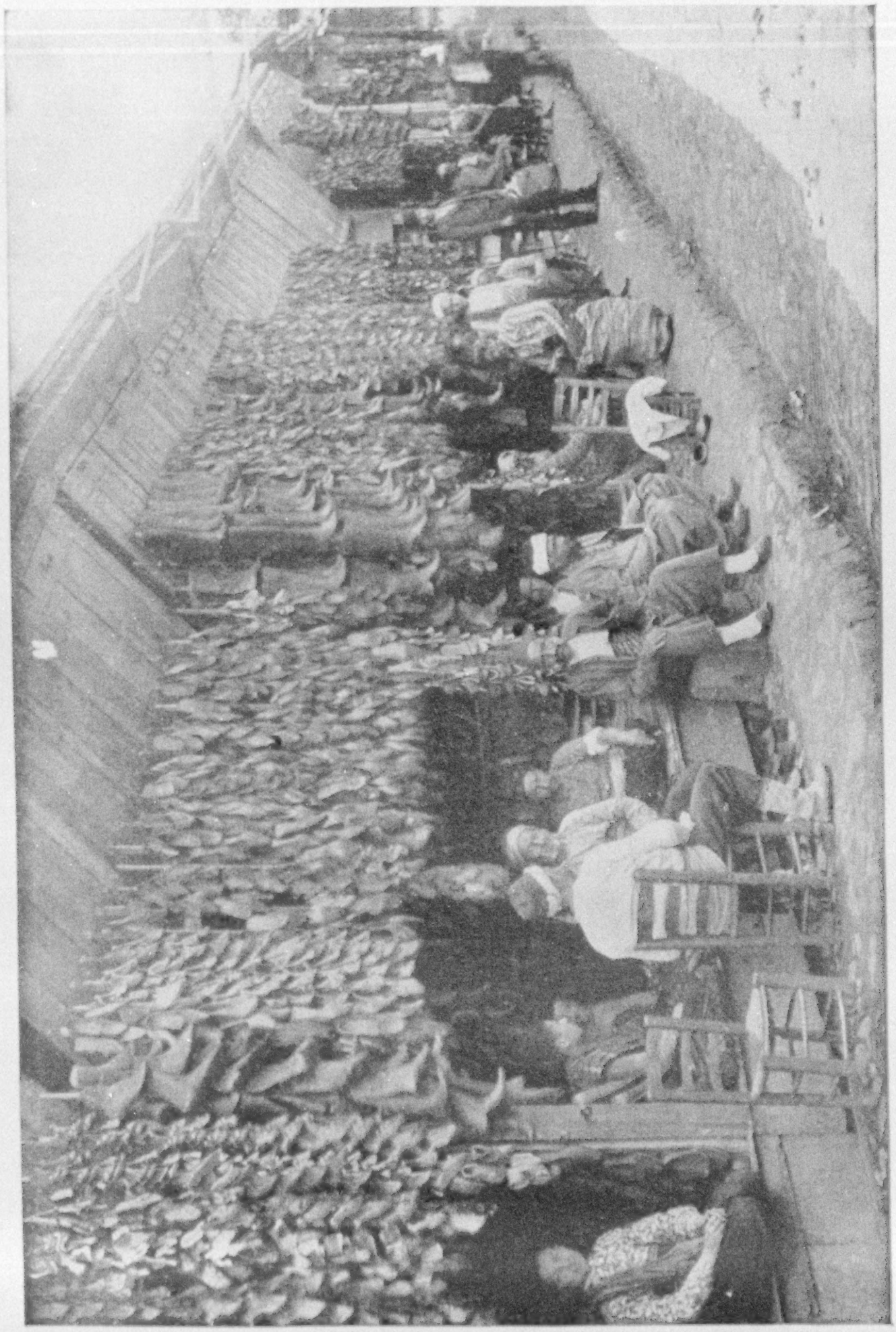

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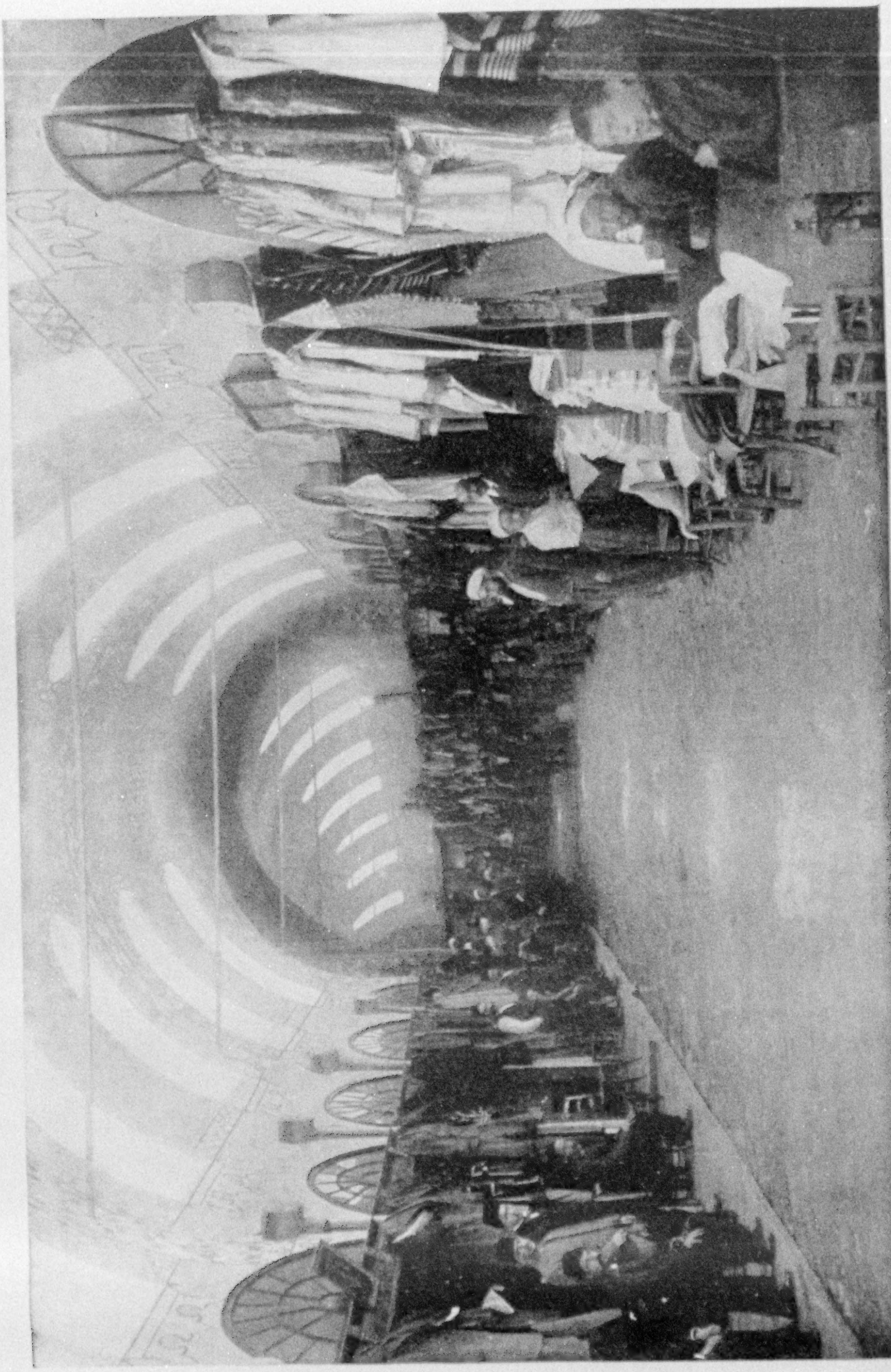
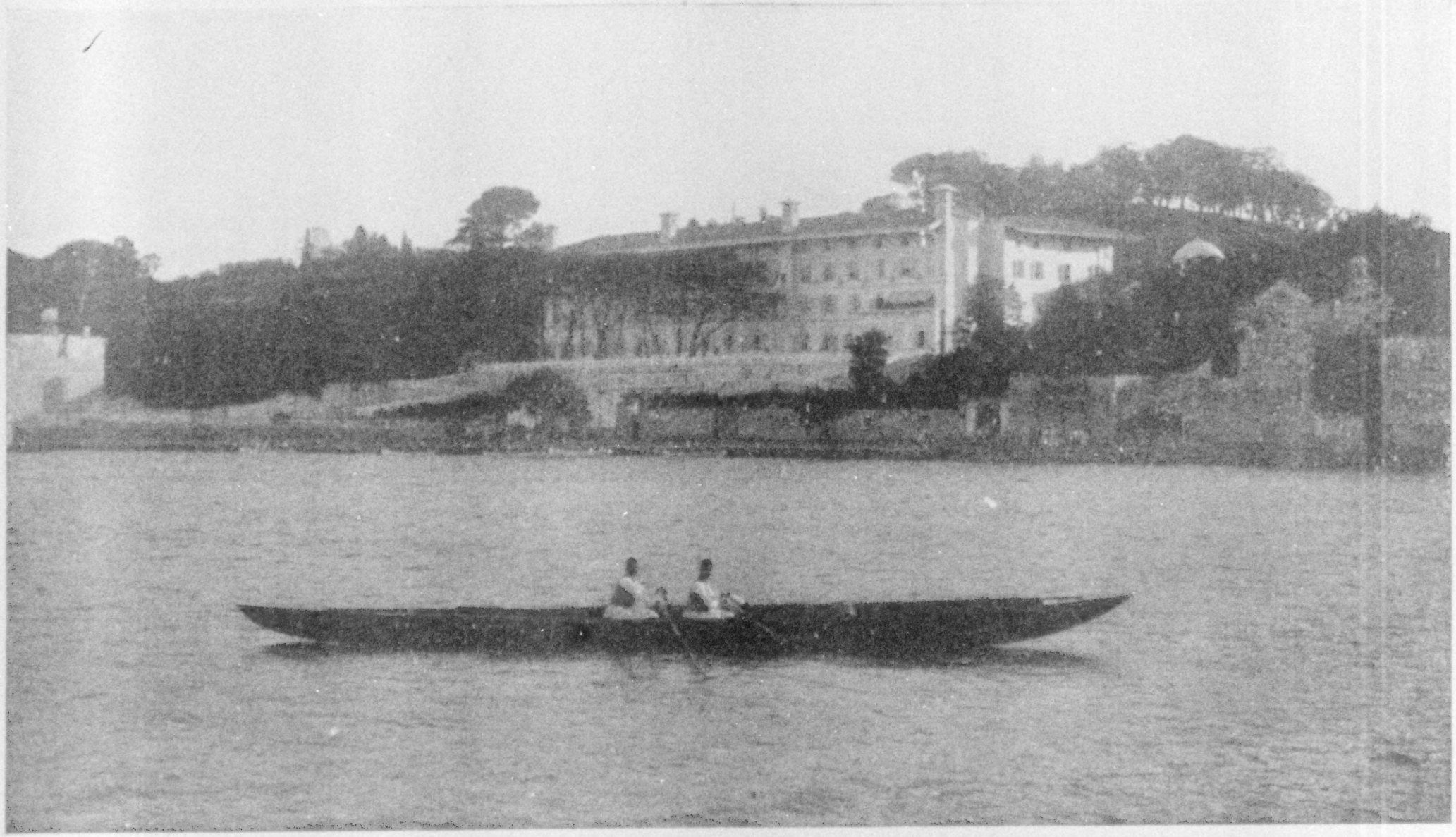


SCENE IN A TURKISH BAZAAR

ROBERT COLLEGE, FOUNDED BY AMERICANS, AND THE CASTLE AT ROUMELI HISSAR, ON THE BOSPORUS

"Americans little realize what an important influence their countrymen and countrywomen have exerted in bringing about constitutional government in Turkey. . . . 'For 80 years the American missionaries have been laying the foundations and preaching the doctrine which makes free government possible.' . . . . . The great educational system founded by these Americans comprises at present more than 300 common schools in the Empire, 44 high schools, 8 colleges, 1 normal school, and 5 divinity schools."

THE FAVORITE AND SUMPTUOUS PALACE OF MANY SULTANS: DOLMA BAGHTCHEH, ON THE BOSPORUS



A TWO-OARED CAIQUE ON THE BOSPORUS: THIS PICTURESQUE CONVEYANCE HAS BEEN ALMOST DISPLACED BY MORE MODERN, MORE SERVICEABLE, BUT LESS PICTURESQUE BOATS

been confined in a palace on the Bosporus for 33 years of his life, the period of his predecessor's reign, and who is now the beloved ruler of his people.

TROUBLES IN ALBANIA

No country in the world ever gained the priceless blessing of freedom without some trials. In October, 1910, the province of Albania, one of the western colonies of Turkey bordering on the Adriatic Sea, began to give trouble, and as a matter of course it was announced by European news-gatherers, who by the way give us all our information regarding Turkey, that this was due to the undying hatred of the followers of Islam for all Christians, and that it was for the purpose of exterminating them that this conflict was inaugurated by the Turk.

It should be remembered that during the last years of Abdul Hamid's reign the Albanians were his most trusted adherents in the army. In order to main tain their loyalty to his person he had released the colony from the payment of taxes and cajoled them into doing his bidding by many acts of favoritism not accorded to the troops recruited in other parts of the country. In this way he kept their fealty. But when the new order of things was established and liberty and equality became the watchwords of the nation, the Albanians accepted all that was coming to them of the first, but declined to give up any of their former privileges in the interests of equal rights. They demanded that only the Albanian language should be used in the schools and that the dominant race—the Turks—who had acquired possession of the coun try by conquest—the strongest claim tha any people can set up—should have noth ing to do with the internal policy of thei land.

Naturally the ruling powers of the Empire could not agree to any such conditions, and an Albanian revolt against constitutional authority followed. The Albanians are a hardy mountainous race of men, who have kept themselves poor and their land barren by internecine wars ever since they, as a part of the Mohammedan race, conquered the country.

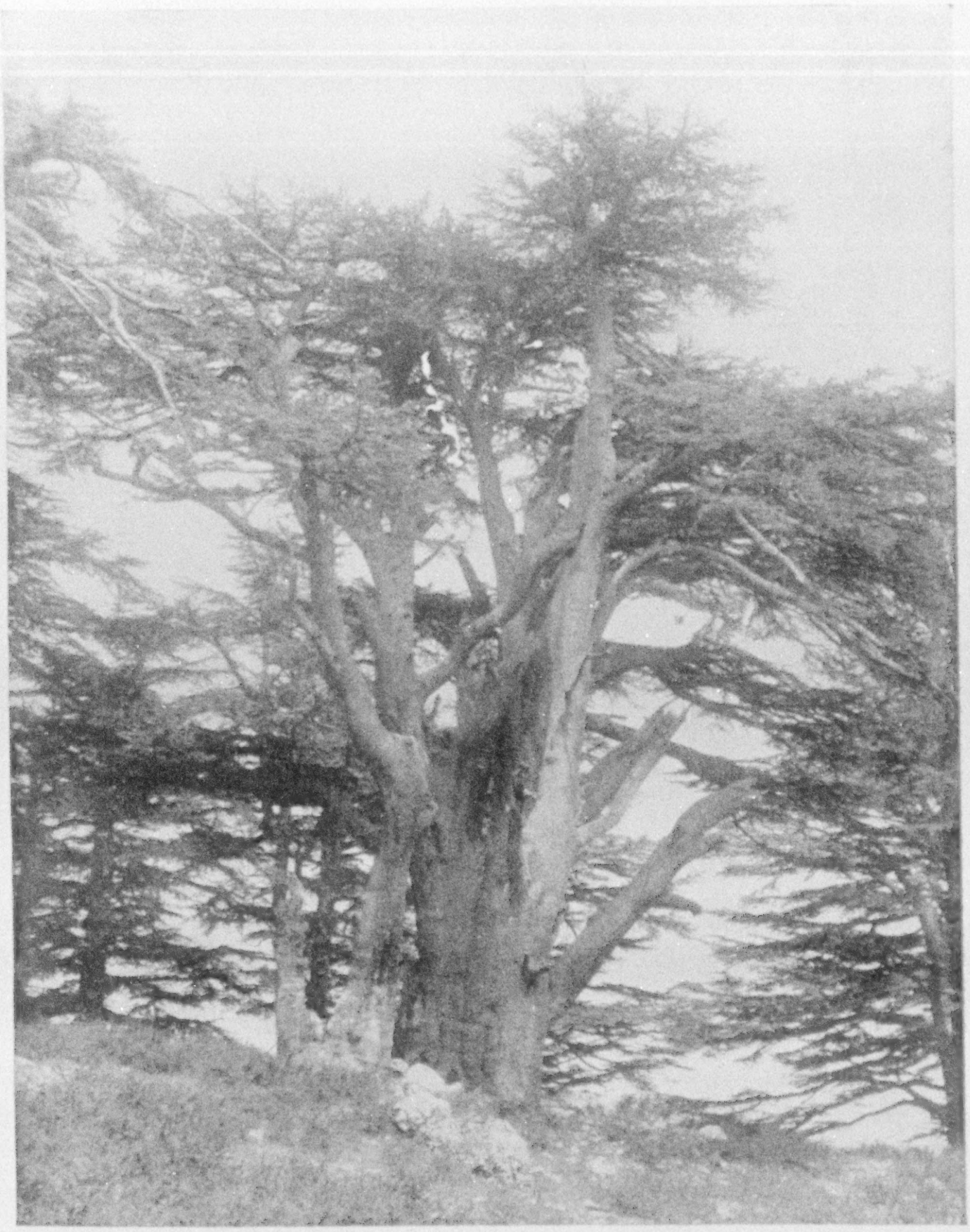
It was declared by the numerous interested sympathizers with the revolutionists in Europe that the Turks could never conquer Albania. But in spite of this widely dispersed impression, Mohammed Shefket Pasha, who had now become Minister of War in the Cabinet, went with a portion of the army to the scene of the revolt, and in less than six weeks the Albanians were suing for peace by presenting him with the usual ceremonious bowl of milk as a token of submission.

Like General Grant, Shefket Pasha was called a "butcher" for the drastic and energetic measures used by him in putting down the rebellion, and a cry of "foul massacre of the Christians" went up from all over Europe. No attention was paid to the fact that the majority of the inhabitants of Albania are of Mohammedan persuasion, and that the conflict was due neither to religion nor race, but to politics.

Hardly had the Albanian revolution been put down before another broke out in the Yemen, the southeastern part of Turkey in Asia. The Bedouin tribes in the Arabian desert attacked the outlying military stations there, very much as our own Indian races have repeatedly done in the United States. This outbreak was of such proportions as to necessitate reinforcements from all parts of the Turkish Empire, and the European military posts were depleted of troops in consequence. The Albanians, still smarting under the condign punishment inflicted upon them during the late uprising, at once took advantage of this situation to again take up arms, such as they could command—and there were many willing sympathizers to bring them supplies—but this outbreak was so short-lived as to hardly warrant newspaper mention.

UNITED IN TRIPOLI

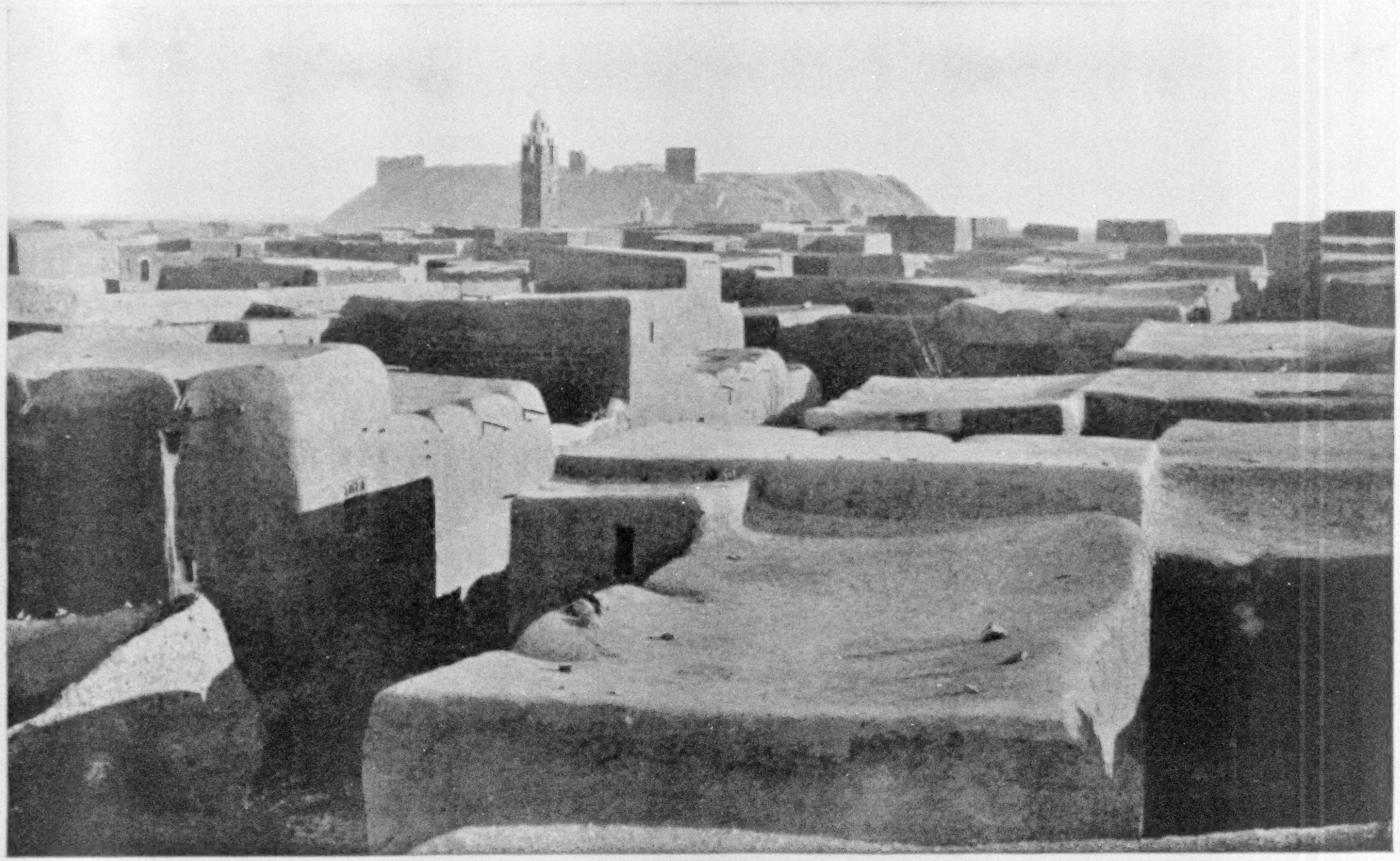
The outcome of the Yemen insurrection is best told in a statement made by Hilme Pasha, a former Grand Vizier of Turkey, as recently published in a letter from Constantinople. He says: "Turkey's ex-enemy in Yemen, the Imam Yahra, who concluded peace and friendship with the Sultan, is declared to have



A CEDAR OF LEBANON, IN SYRIA

The cedars of Lebanon have been famous from early times. The original groves mentioned in the Bible have become greatly reduced, and the largest grove now known contains only about 400 trees, some of which are evidently of great age. The trees are noted for the size of their trunks rather than for their height. They differ from most conifers in that their branches are wide-spreading. The cones and leaves resemble those of the larch more than any other tree, except that the leaves are persistent. It thrives in the United States only in the South and in California.

A HOLY MAN (MOHAMMEDAN), OF SYRIA



VIEW OF HOMS, ON THE DAMASCUS-ALEPPO RAILWAY: SYRIA

Homs has been an important town for thousands of years, as it connects the Great North Road from Egypt, Palestine, and Damascus by the Orontes Valley. The town or its vicinity has been the scene of savage battles from the time of Rameses. The Arabs made it one of the largest cities in Syria, with tremendous walls and a strong citadel. The ruins of the latter may be seen on the hill in the distance. The construction of the Damascus-Aleppo Railway is bringing back much of its former prosperity, as the surrounding district produces much silk, cereals and fruit. (See map published as a supplement to this number of the NATIONAL GEOGRAPHIC MAGAZINE.)

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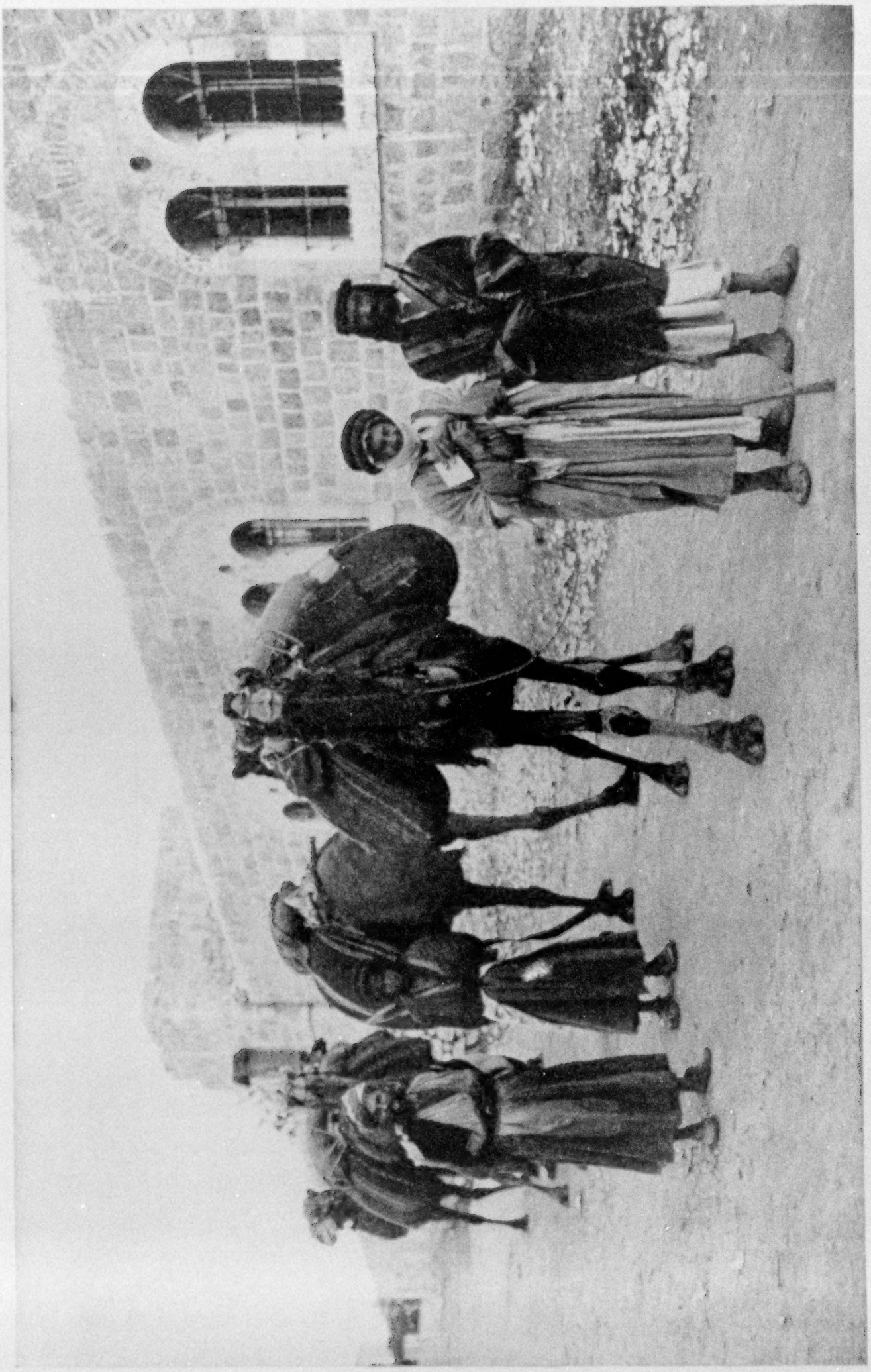
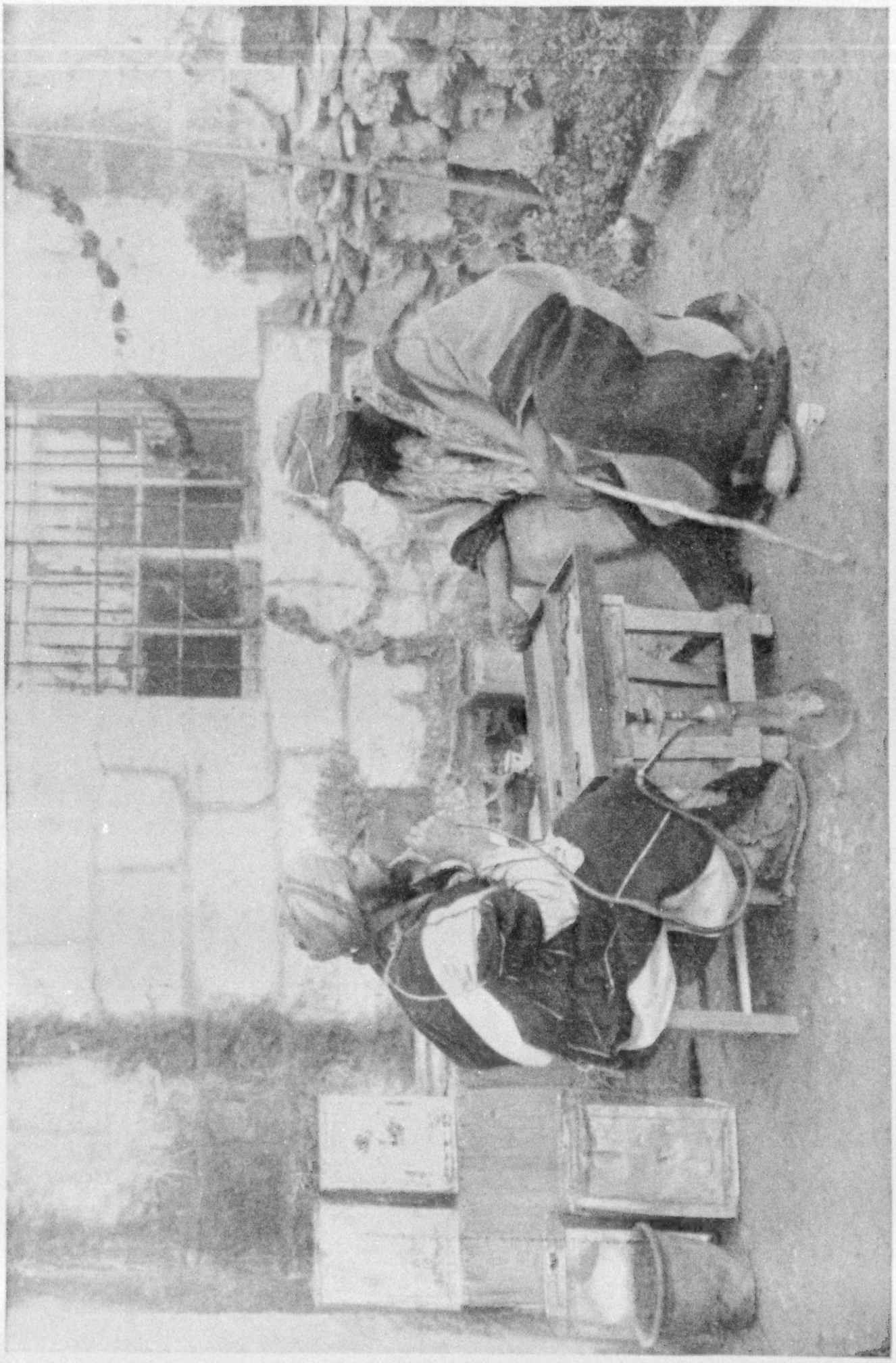


BRINGING WHEAT TO THE RAILWAY AT HOMS



A GAME OF BACKGAMMON, IN SYRIA

spontaneously promised to render solid assistance to his Moslem comrades in Tripoli." Another newspaper dispatch refers to the "solid assistance" as an armed force of 10,000 men from this tribe contributed to the defense of Tripoli.

This would seem to prove the truth of what has frequently been stated by Turkish sympathizers: that it is only necessary for foreigners to strike a blow at the integrity of Turkey to bring about a coalition of Mussulmen in defense of the Empire.

During these internal trials of the new Turkish government, Greece again demanded that the promise made by England, that she should be put in possession of the beautiful island of Crete, should be fulfilled, and took advantage of Turkish misfortunes in Yemen to press her claim. But the Young Turk party promptly informed the British authorities that not another inch of territory would be given up to any power. They announced that Turkey would fight to the death to maintain her sovereignty in Crete, and that England herself would surely be brought into the conflict with disastrous results to the peace of Europe if this claim was pushed. With such an alternative staring her in the face, England was forced to disavow her promise to Greece, and the Ottoman flag still floats over Crete.

It is too soon to predict the outcome of the present conflict in Tripoli, but if it results in a "holy war," as is not unlikely, it would seem that there can be but one result in the issue. Emperor William II, a few years ago, made a speech in Jerusalem, in which he said, in effect: "Allied as I am with my good friend Abdul Hamid, the Padishah of 225,000,000 Mohammedan subjects, Turkey, in combination with my grand army, need have no fear if the whole world combines against us."

Emperor William, by this appeal for Moslem support, was but inviting in advance the very danger to western civilization that now threatens.

But what nation is there that does not appeal to the divine power that rules its destiny when the stress of war comes? "God favor our righteous cause," is the cry on the lips of every believer, whether he be Moslem, Jew, or Gentile; or, to quote from an inscription found upon the walls of the imprisoned British troops at Delhi during the Indian insurrection:

> "When war is rife and strife is nigh,
> God and the soldier is all the cry;
> When war is o'er and peace requited,
> God and the soldier is always slighted."

CORRUPTION IS AT AN END

I have thus attempted to give a brief account of Turkish history during the past three and one-half years, which is a record of stupendous trials that have beset the Young Turk party in their efforts to help the country in its way toward reforms and a new national life.

The question is: Have the Young Turks fulfilled, as far as might be expected under the prevailing difficulties, promises made when they took office? The answer may be summarized as follows:

It is only necessary to note the happy, smiling faces of the inhabitants in Turkey today to realize that despotism is a thing of the past. Order in the Empire has been kept under the most trying circumstances. Fraternization of the different races, which at first might have been interpreted as the exuberance of the freedom of action permitted by the constitution, has continued. Fear has been banished, ambition for knowledge strengthened, and thought enlivened. Corruption, which, under the old régime, was rampant, is now speedily brought to justice, so that today there is no more honest administration of governmental affairs in the world than in Turkey. The strength of the foreign policy of the government is demonstrated by the stand it took against England in the case of the island of Crete, while the stability of the internal program of the Young Turks is shown in the frequent successful rapid-transit movements against revolutionists.

If we would but "look for the good that is in the worst of us instead of the bad that is in the best of us," we would find some characteristics of the Turkish race that we might emulate to advantage. I do not except from these many of their

XUM

FISHERMEN ON THE SEA OF GALILEE, NOW CALLED THE LAKE OF TIBERIAS; PART OF THE TOWN OF TIBERIAS MAY BE SEEN IN THE DISTANCE

Tiberias was built by Herod between 16 and 22 A. D., and was named in honor of the Emperor Tiberius. As Herod had to disturb an ancient graveyard to make room for the city, the Jews refused to live in it, but after the fall of Jerusalem it became the chief center of Rabbinic learning, the Jerusalem Talmud being edited here. The town today has a population of less than 4,000, and is notorious for its dirt and fleas.

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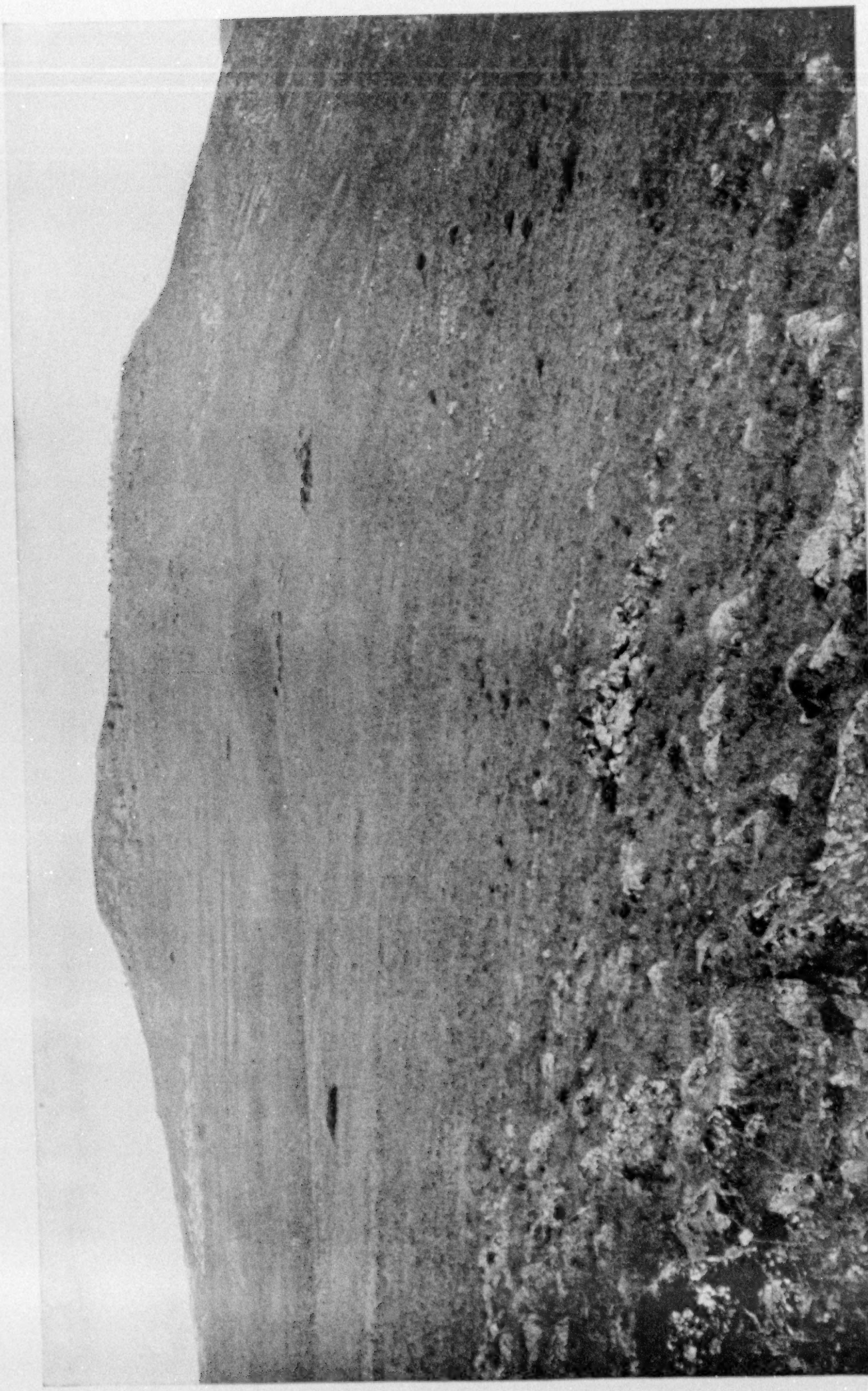

THE HILL FROM WHICH JESUS CHRIST IS BELIEVED TO HAVE PREACHED THE SERMON ON THE MOUNT

IN THE SYRIAN DESERT, EAST OF THE LEBANON

religious forms. The total abstinence from intoxicating liquors among the Moslems is due to a strict tenet of their religious creed.

The Mohammedans worship the same God as do the Christians, with a devotion that is inspiring to any one devoutly inclined; and even in their reverence of the great Head of the Christian church they set an example worthy of emulation. If one would visit the Church of the Holy Sepulchre at Jerusalem and see the devotional attitude of the Moslem guard the government of Turkey is forced to maintain there to keep the peace—not between the Mohammedan and Christian, but between the Christian sects themselves, who there worship at the shrine of our Saviour—he will be forced to blush for his own religion while he pays a tribute of respect to Islamism.

That detestable subject of polygamy among Mohammedans of today is not fully understood by us. While plurality of wives is permitted by the Koran, its practice is unquestionably dying out in Turkey.

THE LEADING WOMAN OF TURKEY

One of the finest women I have ever met, who is of the Mohammedan faith, is now engaged in Constantinople in a propaganda for the education of the women of Turkey, which is full of promise for the social status of the mothers of the country.

To this grand woman I cannot refrain from paying a tribute of greatest respect. Helideh Salih, a graduate of the American College for Girls, is the leading woman in Turkey in popularity and influence. She is at the head of this organization for the redemption and uplift of her countrywomen. Already has the government, at her instigation, officially installed five Young Turkish women at this magnificent American school of learning, in cöoperation with her work.

I am sure that American women could not read the pathetic cry of this Turkish woman to more civilized womanhood for their support and sympathy without a heart pang that would shake their very souls. I wish I might give it in full.

"Come," she says, "to this land where the most terrible want of knowledge exists. Come and help us to disperse the dark clouds of ignorance." That grand American woman, Miss Helen Gould, has already answered her appeal with munificent aid through the American College for Girls, which now has hundreds of young women students of pure Turkish blood, where during the Hamidian reign it had but one.

I have stated that Turkey is as far advanced in popular government today as were the American people at the end of the first decade of its constitutional history. This is no idle statement, and, as a matter for comparison, I would like to recall a brief outline of the events occurring in our own country during this period:

In the heyday of our prosperity, we are apt to forget the mistakes made by our forefathers in their efforts to establish popular government, only remembering the grand things accruing from their endeavors, after a long experience in handling the Ship of State.

Three years after the Treaty of Peace established between the revolting American colonies and the Mother Country, 1783 (the same period of time that has elapsed since the constitution was proclaimed in Turkey), we find, according to history, that the citizens of the various States in the American Union discovered, *by experience*, the disabilities to which they were subject from a want of proper system, and began to clamor for reform.

Commissioners, called together at a weak-hearted convention in Annapolis, announced that "the crisis is arrived, at which the people of America are to decide the solemn questions, whether they will reap the fruits of independence and of union, or whether, giving away to unmanly jealousies and prejudices, or to partial and transitory interests, they will renounce the blessings prepared for them by the Revolution."

During seven or eight years, in fact, after the War for Independence ceased, the nation was humiliated to the quick

GENERAL VIEW OF THE ACROPOLIS AND THE GREAT TEMPLE RUINS AT BAALBEK

Baalbek was once the most magnificent of Syrian cities, full of palaces, fountains, and beautiful monuments. Today it is famous only for the splendor of its ruins. The glorious temples at Baalbek were built by the Romans early in the Christian era, being dedicated by Septimus Severus about 200 A. D. Immense treasures were lavished by the Roman emperors upon these wonderful buildings. Baalbek is situated on a branch of the Damascus Railway (see the map which is published as a supplement).

THE BIGGEST PIECE OF STONE EVER BLOCKED OUT IN A QUARRY

It is 68 feet long by 14 feet high and weighs about 1,500 tons. The block is still attached to its bed in the quarries, about one-half a mile from the ruins of Baalbek. The Temple of Jupiter contains three megaliths almost as large as this gigantic block

SCENE AMID THE RUINS AT BAALBEK: NOTE THE MAN

The history of Baalbek before the Roman era is involved in darkness, but it is certain that from very distant times it was one of the principal seats of sun worship

THE GREAT TEMPLE OF JUPITER, OR OF THE SUN: BAALBEK

This was the largest and most famous of the temples. It was sacred to Jupiter (Baal), with whom were associated Venus and Mercury. This magnificent building formerly boasted 54 columns, of which these 6 remain. The pillars are formed of three blocks and are 60 feet high. Note the man standing beside the pillar.

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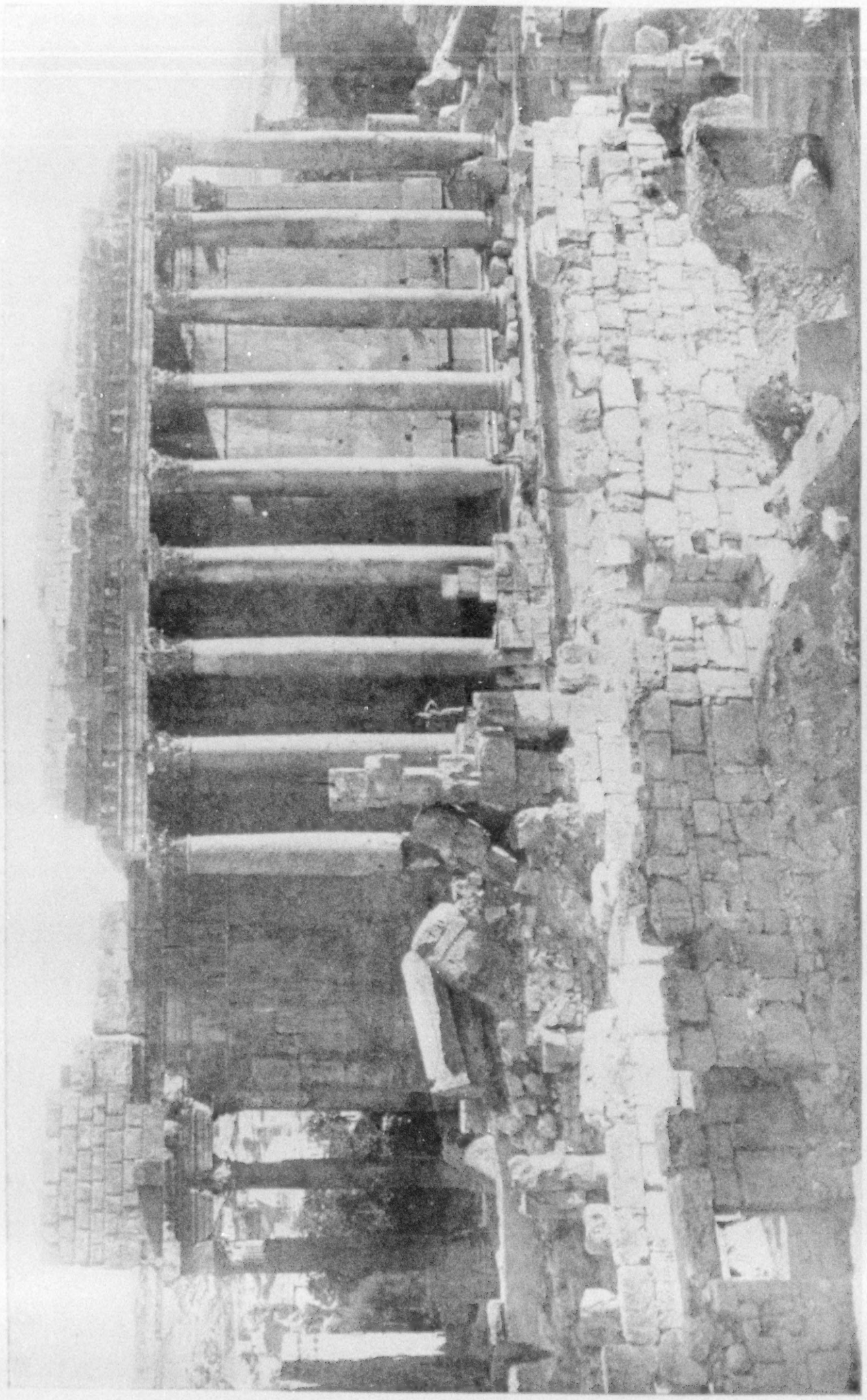

THE TEMPLE OF BACCHUS, BALBEK; THIS TEMPLE IS SMALLER THAN THE TEMPLE OF JUPITER AND IS BETTER PRESERVED

GREAT GATE TO THE TEMPLE OF JUPITER; BAALBEK

Legend states that the Temple of Jupiter contained a golden statue of Apollo, or of Zeus, which at annual festivals was borne on the shoulders of the chief citizens through the streets of the town, which was then called Heliopolis.

THE INTERIOR OF THE TEMPLE OF JUPITER: BAALBEK

When Constantine was converted to Christianity the temple became a Christian church. The Arabs sacked all the buildings in 748, and converted the Acropolis into a fortress and constructed large battlements around it. Succeeding wars of Arabs, Tartars, Turks, and Crusaders, and earthquakes gradually reduced the buildings to their present state. Many of the magnificent pillars were overturned merely for the sake of the iron which bound the blocks together.

by the defeat of our armies in conflict with Indian tribes, similar, in some respects, to the races that have made trouble for the Turks; and as late as 1798 a strong party—the Federalists—under the leadership of Alexander Hamilton, were contemplating an alliance with England, and the cry "Let us have a king!" was quite as frequently heard as "Support the President!" and such reaction against constitutional government finally led to the perfidy of Aaron Burr.

America, as a Christian nation, now well advanced in years, bearing a history replete with unselfish action towards weaker nations, can well afford to continue the practice of the Golden Rule in its attitude with respect to these people of the "Near East," who are the pioneers, among Mohammedan races, in the struggle for government "of the people, for the people, by the people;" and, if upheld by Christian sympathy, will surely spread the doctrine of freedom which came down to us as a birthright from our forefathers, who purchased it for us at a fearful cost of blood and treasure.

This spirit, set up here in Turkey, has been carried like a tidal wave through Persia, the States of Central Asia, right into the very heart of the great Empire of China, where is begun an irrepressible conflict for liberty, toward which the whole world is marching.

To America, the first-born child of political and religious liberty, this Eastern civilization turns in its hour of trial for the sympathy and encouragement which we so naturally should give, as the one power that can help them in their battle against despotism and oppression. Persia is now struggling in the throes of political reform, and is knocking at our door for a kind word to aid her in her efforts to secure freedom.

Shall we not, then, in the name of Him who died to make men free, extend to the regenerated people the hand of fellowship, as we watch, with sympathy and hope, their struggles for this divine right bequeathed mankind?

THE GREEK BRONZES OF TUNISIA

By Frank Edward Johnson

With Photographs by Courtesy of Monsieur A. Merlin, Directeur des Antiquities et Arts of Tunisia, North Africa

THE picturesque little Arab town of Mahdia (Mahadia) lies between Soŭsse (Susa) and Sfax (Sfaks), on the coast of Tunis. The honk-honk of a tourist automobile seldom breaks the silence of this small town, and the coast steamers usually pass during the night, so that the beautiful skyline of the minarets and flat-roofed Moorish houses outlined against a sunset sky are rarely seen by European eyes. Roman ruins dot the foreground, running almost into the sea, and on top of the hill are the remains of an old Spanish fortress that reminds one of the Spanish Invasion.

In June, 1907, Greek sponge-divers were busy bringing up sponges out of a sapphire-colored sea, streaked here and there with emerald green, when one of the divers came up greatly excited, saying that he had seen what looked like cannon lying in the sand. He was laughed at by the members of the crew; but the captain of the ship went down to investigate, and found the remains of a Greek galley filled with building materials and bronzes and marbles for the erection of a villa at Rome. The discovery was immediately reported to Monsieur A. Merlin, Director of Antiquities and Fine Arts in Tunisia, a man of great knowledge and experience, whom the French government had sent out to take charge

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THE LITTLE DIVERS' BOAT, USED IN RECOVERING THE BRONZES (SEE PAGE 101)

For location of Mahdia, see map published as a supplement to this number

of the museums and the excavations of the Protectorate of Tunisia in northern Africa.

Monsieur Merlin went immediately to Mahdia to investigate for himself, and found that the Greek galley carried on its deck 40 or 50 huge marble columns, the weight of which prevented the divers from getting at the lower decks.

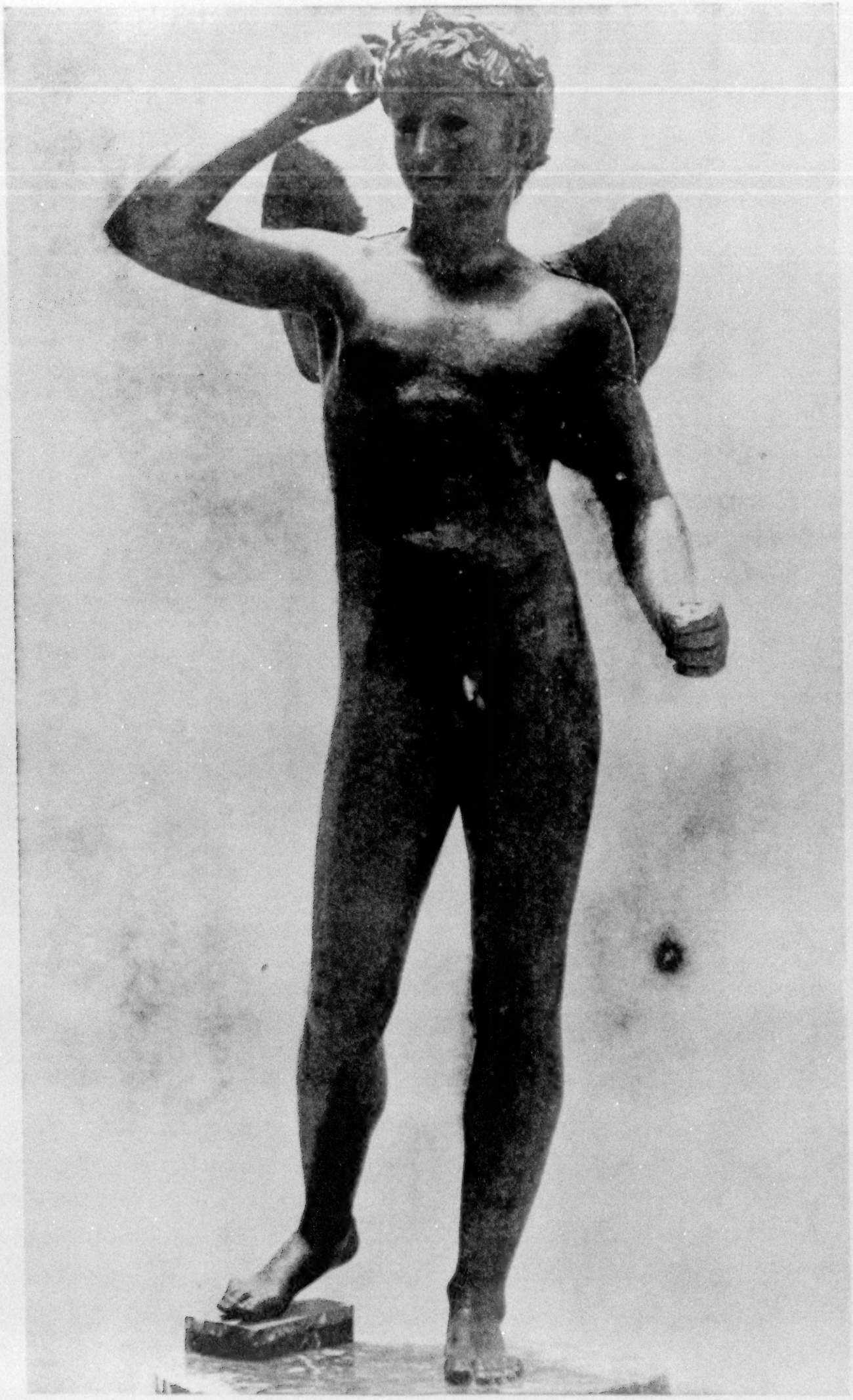
Unfortunately, funds for excavating purposes were at a very low ebb at this time, and the French government very unwisely did not coöperate in its various departments; so that, in spite of the fact that there were in the marvelous naval harbor of Bizerta, near Tunis, lying idly at anchor, huge French dreadnaughts and men-o'-war, with crews numbering from 800 to 1200, and carrying complete diving equipments not being used, nothing was done by them to advance this work, when at a word from the Minister of Marine any of these vessels could have been sent down to Mahdia and, at no extra cost or expense to the French government, have placed a large equipment of divers at the disposal of the Director of Antiquities and Fine Arts, thus accomplishing the work of bringing to the surface all these wonderful treasures.

On the contrary, Monsieur Merlin had to hire local Greek divers from the port of Mahdia, and these curious marine excavations have been carried on with but a few thousand francs a year.

The sunken galley lies about five kilometers off the coast, in rather deep water. The exact spot is hard to mark, because the sea runs in very heavily, and there are numerous currents that frequently carry away the large buoys that are anchored there to mark the spot.

Sallust, the Roman writer, has already described the Mediterranean on this part of the coast of Africa as being "terrible," and it has not changed since he wrote about it.

The Greek bronzes and marbles which have been recovered from the galley during the past four years are of most interest to us. The bronzes are of two cate-



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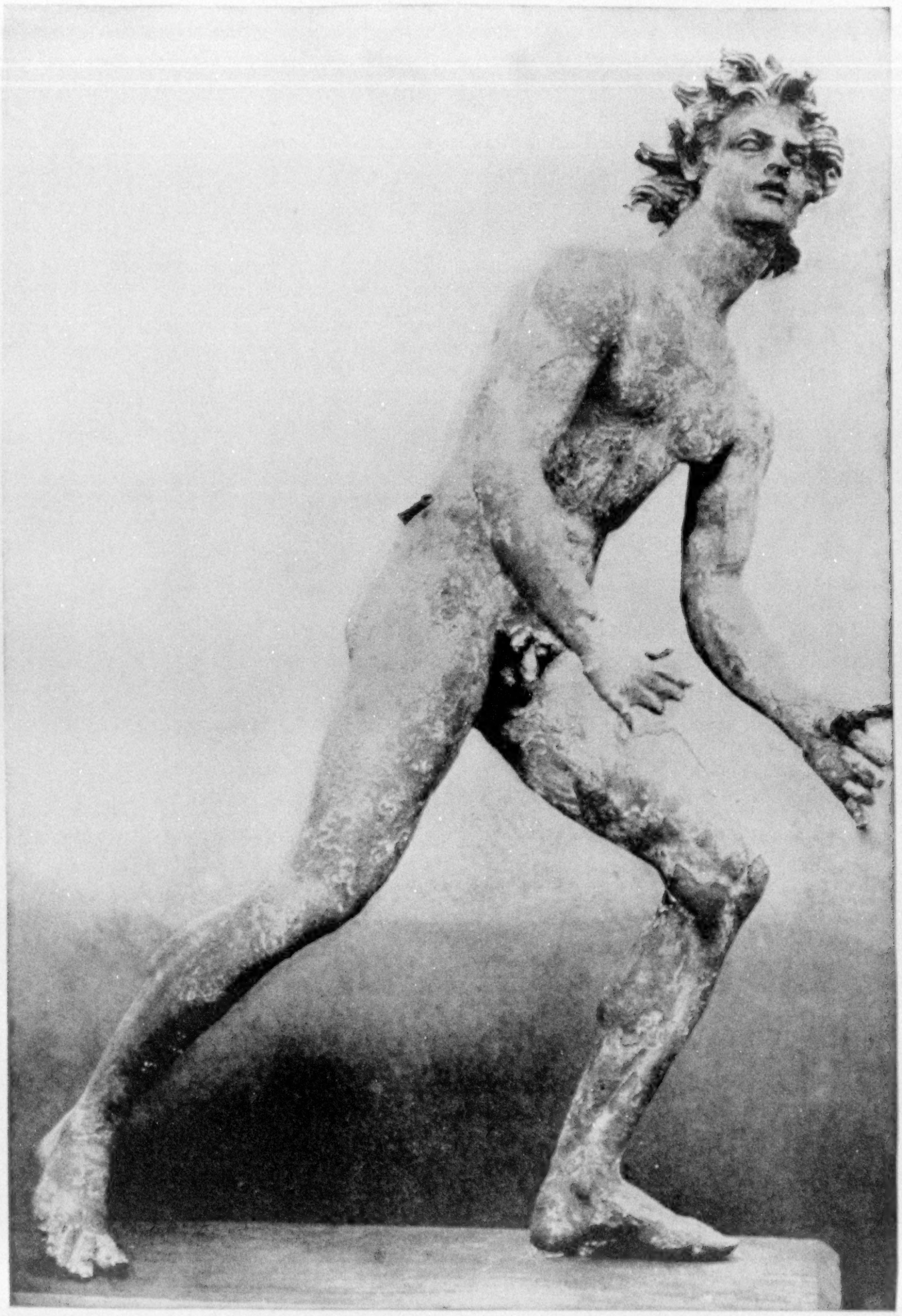
NO. 1. EROS: ATTRIBUTED TO PRAXITELES

The bronze is almost life-size, and stands 1 meter 40 centimeters high. This god has just alighted from flight. His wings seem to beat the air. His right arm points to a crown of laurels, and in his left hand he held a bow, which was never found. Eros has just won the laurel wreath at archery.



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NO. 2. STATUETTE OF A SATYR ABOUT TO RUN: HEIGHT, 35 CENTIMETERS

The expression and action in this bronze are remarkable, as well as the scowl on the brow, the slightly opened lips, and the dilated nostrils. One cannot help thinking of the "Dying Gaul" in the Museum of the Capitol at Rome. Pliny informs us that the Gauls wore long hair, which made them resemble Pan or Satyrs.

gories—bronzes for decorative purposes and statutes. When they were taken out of the water they were covered with thick deposits of seashells and mud. Curiously enough, the bronzes withstood their 2,000 years' sea-bath better than the marbles.

In this short article we shall speak especially of the eight following bronzes:

No. 1 is the god Eros, attributed to Praxiteles. He stands one meter 40 centimeters high, almost life-size. This god has just alighted from flying; his wings seem to fan the air. In his left hand he holds a bow (which is now missing). His right hand is lifted to his head and points to a crown of laurels, which has evidently just been won at archery. This statue when found had its legs badly battered in. The wings were missing, and only last year was his right arm found. Because of the size of this bronze, it is one of the most important works of Greek art. To whom must it be attributed? It is incontestably an original and is probably by Praxiteles, because a Greek authority named Calustige left behind the description of a bronze statue of the god Eros by Praxiteles which resembles in a most marvelous way this bronze. The following is a translation of Calustige's description:

"It is an Eros, a work of art by Praxiteles—Eros himself, in the adolescent flower of his youth, with wings, carrying a bow, affixed to a base from which he cannot move. He gives us the illusion that he is going to fly away. He bends back his right arm toward the top of his head, and in his left hand he holds a bow. The weight of his body is carried on his left leg." Whoever this unknown sculptor was, the bronze not being signed, it is certain that we have an Eros here worthy of the famous sculptor.

No. 2 is the statue of a satyr, starting to run. It stands 35 centimeters high. The movement is marvelous. The power and grace of his figure, crouched ready to spring, his arms outspread like a runner starting in a race, the frown on his face, his dilated nostrils, and his slightly opened mouth—all make him seem almost alive. The movements of his most realistic attitude are remarkable, resembling the school of Pergam towards the end of the third century B. C. This statue reminds one of the Gauls, especially the monument of Attele I and the Dying Gaul in the museum of the Capitol at Rome, for "Diodore of Sicily" writes that the Gauls had hair which made them resemble a Pan, or satyr.

No. 3 shows the cakewalk of the Grecians 2,000 years ago. This little statuette, 30 centimeters high, proves that the hobble skirt was not the creation of Paris dressmakers in 1911, but of some great modiste of Athens. These statuettes are extremely rare in Greek art, as they represent dwarfs with abnormally large heads and grotesque figures. Greek sculptors admired form in line so much that one rarely found ugly or comical works of art among them. The Romans at the time these figures were made enjoyed watching the antics of dwarfs, male and female, and grotesque jesters during their banquets, and these three statuettes (pages 94, 95 and 97) were doubtless lifelike copies of some well-known public entertainers.

No. 4 is a pendant to the cakewalk dancer, 32 centimeters high. Her eyes are of ivory. She is swinging her foot behind her, whereas the foot of the dancing figure is in front, with her head turned to the left. The former figure has her head turned to the right, and is crowned with a laurel wreath.

No. 5 is a buffoon, or jester—height, 32 centimeters—which completes the series of three statuettes. He is repulsively ugly. He walks forward à la cakewalk, with a twisted body and grimacing face. He had only one eye ,the left, and the round ball which forms his eye is in silver. This brilliant polished metal forms a curious contrast to the greenish bronze of his body, and gives him a devilish look.

No. 6 is a small Eros, 42 centimeters high, advancing toward one, dancing and singing to the accompaniment of his lyre. He has a number of bracelets on his wrists and on his left thigh. His charming grace and elegance make one think of certain terra-cottas; for example, those of Myrima.

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NO. 3. STATUETTE SHOWING THE CAKEWALK OF THE GRECIANS 2,000 YEARS AGO AND THE HOBBLE-SKIRT OF ANCIENT ATHENS, REVIVED BY THE PARISIAN DRESSMAKERS IN 1911

"These statuettes are extremely rare in Greek art, as they represent dwarfs with abnormally large heads and grotesque figures. Greek sculptors admired form in line so much that one rarely found ugly or comical works of art among them."

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NO. 4. PENDANT TO THE CAKEWALK DANCER: HEIGHT OF THIS STATUETTE, 32 CENTIMETERS

Her head is crowned with a wreath. Her eyes are made of ivory, which adds to the realistic effect. "The Romans at the time these figures were made enjoyed watching the antics of dwarfs, male and female, and grotesque jesters during their banquets, and these three statuettes were doubtless life-like copies of some well-known public entertainers."

XUM

No. 7 is a Hermes of Dionysos. The face has a classical nobility, and the beard and hair remind one of early Babylonian sculptures seen in the Louvre or the British Museum. On gazing at this statue the question arises: Is this a Greek work of art? Rather an antiquity handed down from Babylonia; but the treatment of the beard and the hair, which latter is arranged in three rows and the curls falling in spirals down the back, are too detailed and conventionalized to be of an older date. The artist has evidently in a moment of caprice given this head a Babylonian resemblance. Fortunately we are able to state the exact date of the Hermes, for on his right arm we find an inscription in Greek in very small characters:

Βόηθος Καλχηδόνιος ἐποίει ("Boéthos the Chalcedonian made it").

Boéthos lived toward the end of the third century and the first part of the second century B. C. Fortunately we know who he is. Pliny quotes him among the most noted designers of Greek coins, and he is also well known as having made the statue of "A Child Strangling a Goose," of which several museums possess replicas, one being in the Louvre. This artist, during the lifetime of Antioch IV, King of Syria, between the years 175 to 164 B. C., executed at Delos a statue of this prince. The Hermes of Mahdia dates, therefore, during the first half of the second century B. C.

No. 8 is a horse's head in bronze. The treatment of its mane is remarkably lifelike.

No. 9 is the head and bust of Aphrodite in marble. The breast and hair have been much damaged by the water, but fortunately the face and profile have been spared. It has most noble and beautiful features. It is doubtless a copy of an original of the fourth century B. C. It is only a fragment of a heroic statue, which was made in several pieces. Probably the other pieces of the statue arrived in course of time at Rome.

WHITHER WAS THE GALLEY GOING?

The question naturally arises: Where were these Grecian galleys going, and where had they come from? Fortunately manuscripts have been preserved that tell the story of how a galley, ladened with art treasures, was sent to Rome from Greece by Sylla after he had conquered Athens. Sylla had already sent great numbers of marble columns to be used in rebuilding the Capitol at Rome, which was burned during the civil war in the year 83 B. C.

Lucien describes a Greek vessel filled with art treasures that was sent to Rome by Sylla after he had conquered Athens, and this vessel sank in the neighborhood of Cape Malia, near a place called Laconie (extreme southeast cape of Greece). Is not this example particularly significant and curious when compared to the Mahdia galley? But the following is also of interest:

Atticus, a great friend of Cicero, was at Athens in the years 67 to 66 B. C.; that is to say, at about the date the Greek galley was supposed to have sunk. Cicero wrote him a number of letters, which, fortunately, have been preserved, and in them we read the following:

"I am most delighted to learn that thou hast bought me a Hermes in marble, with the head of an antique (Arian), and other art treasures. Send them to me as soon as possible, for I would have them immediately." And again: "I have received the statues in marble from Megare that thou hast sent me. They have given me the greatest pleasure. I shall have them transported to my villa at Tusculum. If thou findest any statues that thou thinkest would please me, do not hesitate to buy them for me."

Several years later he wished to procure some marble columns for a tomb that he intended erecting to his daughter, Tullia D'Athenes.

For many years past, shipments of statues, columns, and precious ornaments had been sent from Greece to Italy for use in the erection of public monuments or private dwellings, or for the ornamentation of private pleasure villas or great Roman palaces, or for the beautifying of Roman gardens or the huge Triclinium, or banqueting halls.

In the galley of Mahdia huge marble columns were found that would have supported a superb edifice; bronze and

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NO. 5. STATUETTE OF A MALE DWARF DANCING THE CAKEWALK; HEIGHT, 32 CENTIMETERS

His repulsive ugliness is increased by his being given but one eye, which is made of polished silver. He advances, twisting and contorting his body and making faces. All three statuettes seem to be dancing to the sounds of a sort of castanet that they hold in their hands.

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NO. 6. A STATUETTE OF EROS PLAYING ON HIS LYRE: HEIGHT, 42 CENTIMETERS

Notice the ornamental bracelets around his ankles, arms, and thigh. His graceful form reminds one of certain well-known terra-cottas by Myrima

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NO. 7. HERMES OF DIONYSOS, BY BOÉTHOS THE CHALCEDONIAN

Who lived toward the end of the third century B. C., and is known to all numismatists as a celebrated designer of Greek coins (see page 96)

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NO. 8. BRONZE HEAD OF A HORSE, USED FOR DECORATION

marble statues to beautify the interior; bronze candelabra that would have harmoniously lighted the great entrance; statuettes that would give joy to the eye of the beholder, or smiles and laughter by their grotesque appearance; furniture that would give ease and comfort to the luxurious Romans; inscriptions that would be the pride of a man of letters for his library.

Are we not right, therefore, in supposing that the sunken Greek galley of Mahdia was one of those engaged in transferring the trophies of war, conquered by the Romans at Athens in the year 86 B. C., and that the entire cargo was composed of the spoils which Sylla was taking back with him, just as Mummius had taken years before, when he took for himself, his friends, and for the temples at Rome the spoils of Corinth?

Those old Romans who counted on the safe arrival of this Greek galley with their art treasures did not take into consideration "Poseidon," the Greek god of the sea, or "Boreas," the Greek god of the north winds.

The treacherous Mediterranean claimed this galley for its own. Driven out of its course by wind and sea, too heavily laden to be seaworthy, the galley was hard to steer. Heavy seas washing over her opened up a seam, and down she sank, with her priceless art treasures, to be found almost 2,000 years later. Who knows but that it was the anger of the gods of Greece for having had their temples desecrated by the Romans that caused the Greek galley to sink, thus saving for generations yet unthought of the wonderful Greek works of art that today grace the Museum of the Bardo, about three kilometers outside the walls of Tunis?

Great changes have taken place in Tunis during the past 25 years. As a boy I remember the Palace of the Bardo as the residence of the Bey of Tunis. Now about half the palace, formerly the harem, has been turned into a remarkable museum for Phœnician, Roman, and Greek antiquities found at the countless Roman, Byzantine, and Phœnician ruins dotted all over the country. The exquisite collection of mosaics surpasses any other museum, and is, alas, not well known. Even the Louvre and the British Museum cannot be compared to the Museum of the Bardo for its Roman and Phœnician collections.

Curiously enough, the land of Dido is coming to its own once more. A great empire is springing up in northern Africa. France, of all countries in the world, ranks first in her admiration for art and all things beautiful. It is therefore doubly fitting that within a few miles of the site of ancient Carthage is to be found under the French flag this marvelous museum.

It is impossible to adequately describe the great difficulties in raising these bronzes and marbles from the sunken galley. The little *sakolève*, or divers' boat, in which the divers work, was hardly larger than a Gloucester seine-boat, and the columns were exceedingly heavy. The divers had to work at a depth of 39 meters, or about 120 feet. The objects, when brought to the surface, had to be cleaned, for they were covered with a thick coat of mud, dirt, and seashells. It was impossible to tell whether an object was a bronze statue of human shape or a broken bit of a marble column. The missing parts had to be found and put together, and the greatest credit is due to Monsieur A. Merlin for his tireless energy and perseverance in spite of every sort of obstacle, not the least of which was the absence of funds with which to continue the work.

The French government is to be complimented on having a man like Monsieur Merlin as Director of Antiquities and Fine Arts in Tunisia. He is one of the great authorities on Roman and Greek inscriptions and has already done notable work in France.

The thanks of the author are due to Monsieur Merlin for his kindness and courtesy in giving him the photographs published with this article, and for much valuable information. Many of the above statements are quoted from his work, "Les Fouilles Sous-Marines de Mahdia."

XUM

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NO. 9. A HEROIC MARBLE BUST OF APHRODITE

The hair and breast have been badly damaged by boring sponges during its 2,000 years' submersion in the Mediterranean. The profile is of great beauty, especially the right profile, of which, unfortunately, no photograph exists (see page 96).

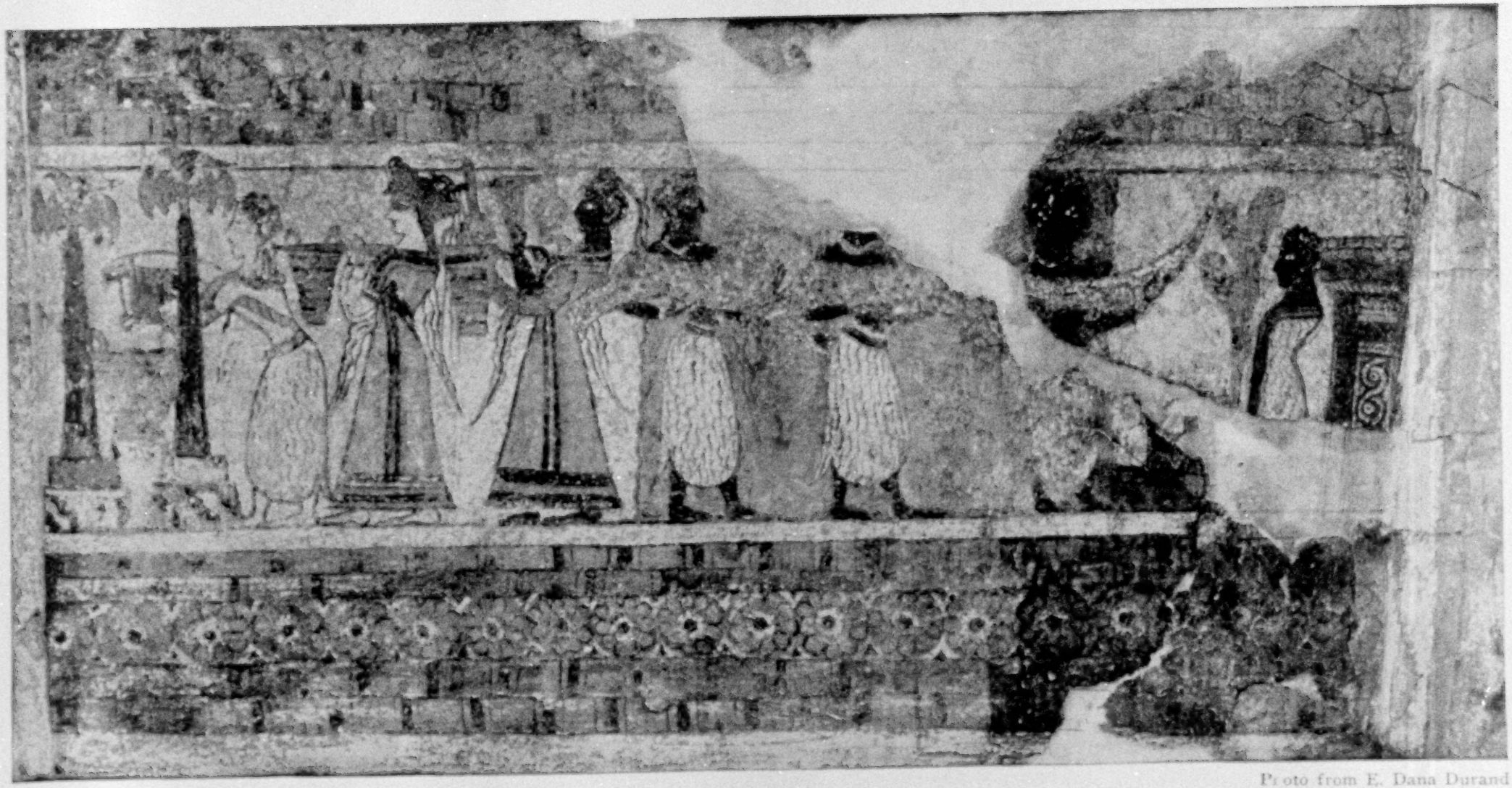


Photo from E. Dana Durand

COSTUMES IN CRETE 3,500 YEARS AGO (SEE PAGES 13 TO 16)

This picture shows the painted side of a wooden chest found in Crete. It represents a funeral procession. The figure at the right is the corpse. Note the double axes on standards at the left

THE GREEK BRONZES

SO MANY requests are being received from members desiring original photographs of the wonderful Greek bronzes illustrated in this number that a special arrangement has been made with the Museum of Antiquities of Tunis to supply a very limited number of photographs on special paper; size, 9 by 12 inches. The price for the complete set of nine photographs, mounted, is $20; for single pictures, $3. Orders should be sent to the National Geographic Society. The proceeds will be forwarded to the Museum at Tunis to further its work of exploration.

MAP OF MEDITERRANEAN REGIONS

THE readers of this Magazine will find the map published as a supplement to this number exceedingly useful during the coming months, owing to the growing interest in Morocco, Tunis, and Tripoli, and in all sections of the Mediterranean Sea. Many articles will be published in the Magazine during the present year on this region, so that the map will be a convenient form of reference to these articles. Members desiring extra copies can obtain them by addressing the National Geographic Society and enclosing 50 cents for each extra copy desired.

Early numbers of the NATIONAL GEOGRAPHIC MAGAZINE will contain a splendid map of China in colors, 16 by 22 inches; a bird's-eye view of the Panama Canal in colors, 9 by 18 inches, and several beautiful panoramas.

NATIONAL GEOGRAPHIC SOCIETY

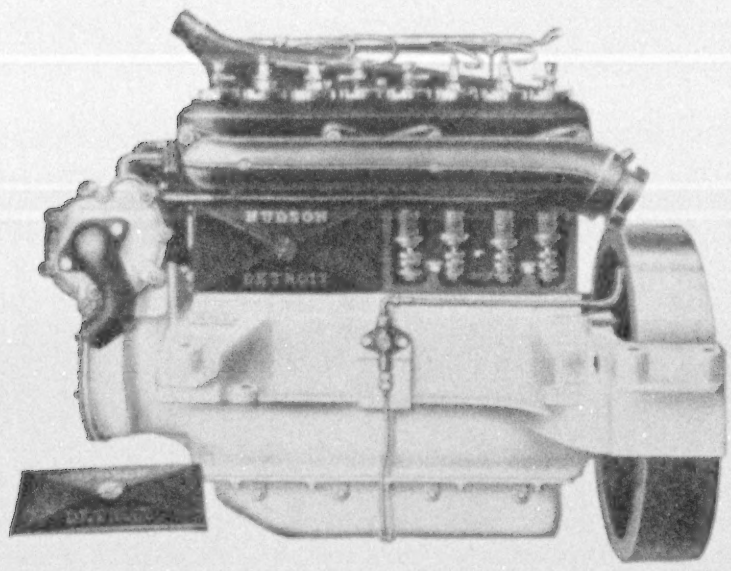
THE National Geographic Society has been advised by the trustees of the late Miss Jane M. Smith, who recently died in Pittsburgh, that the Society has been bequeathed the sum of $5,000 by Miss Smith. It was directed by Miss Smith that the said sum be invested and the net income thereof be used for the purpose of creating life members of the organization in cases where worthy and competent persons are not able to pay for such memberships. She left a very large estate, of which more than $100,000 is bequeathed to 15 educational and religious institutions. Miss Smith was a life member of the National Geographic Society, and was always interested in scientific work. During her lifetime, with her sister, she gave the University of Pittsburgh a splendid collection of minerals, known as the Smith collection.

Mrs. William E. Curtis has given to the National Geographic Society the rich collection of lantern slides made by her late husband, the well-known author and traveler, William Eleroy Curtis. Mr. Curtis had been a member of the Society from its organization. He had always shown a keen appreciation of the National Geographic Society, and in many ways had contributed to its work and welfare.

The American Government. By Frederick J. Haskin. 395 pages. With illustrations. J. B. Lippincott Co., Philadelphia. $1.00.

This book gives a delightful description of the many branches of the Federal Government. Its chapter on the work of the President has been approved by President Taft, and the descriptions of the other departments have each been read and approved by the head of the department, so that the reader may be absolutely sure that every fact contained in the book is correct. Members of the National Geographic Society will be especially interested in reading those chapters which describe what the American Government is doing in practical science for the health and wealth of the American people. The scientific bureaus of the government form the greatest academy of science man has ever known. The many branches of their activities are very graphically described by Mr. Haskin, and with a breadth of understanding that enables every one to appreciate the real value of this work, to which hundreds of the world's brainiest men are proud to give their lives and talents. Mr. Haskin has done a great service in writing and publishing "The American Government." A work of this kind has long been needed by the people, and they are to be congratulated that a man of his experience and understanding has written it.

"The American Government" should be in the library of every American citizen, that he may have a comprehensive knowledge of the stupendous work that is being done for him, and should also be used as a text book in every school, where it will stimulate a patriotic pride and deep interest in the heart and mind of the coming generation.



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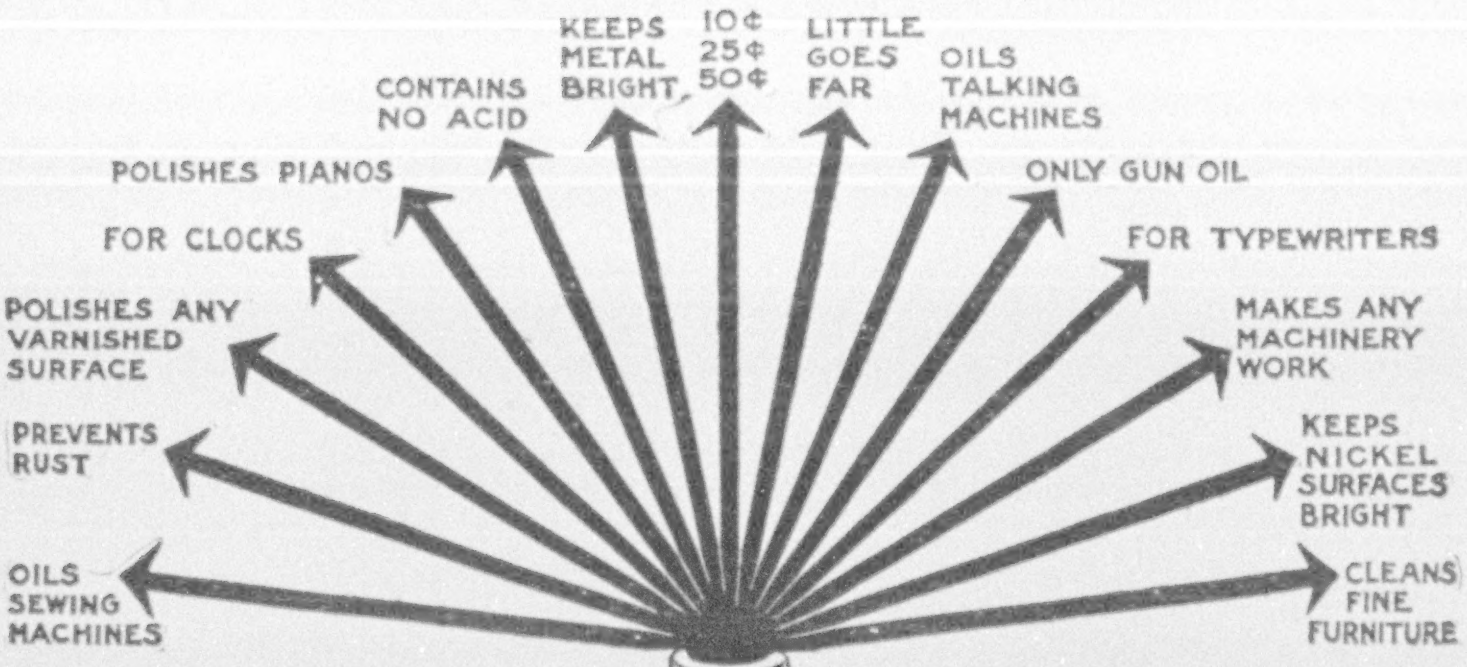

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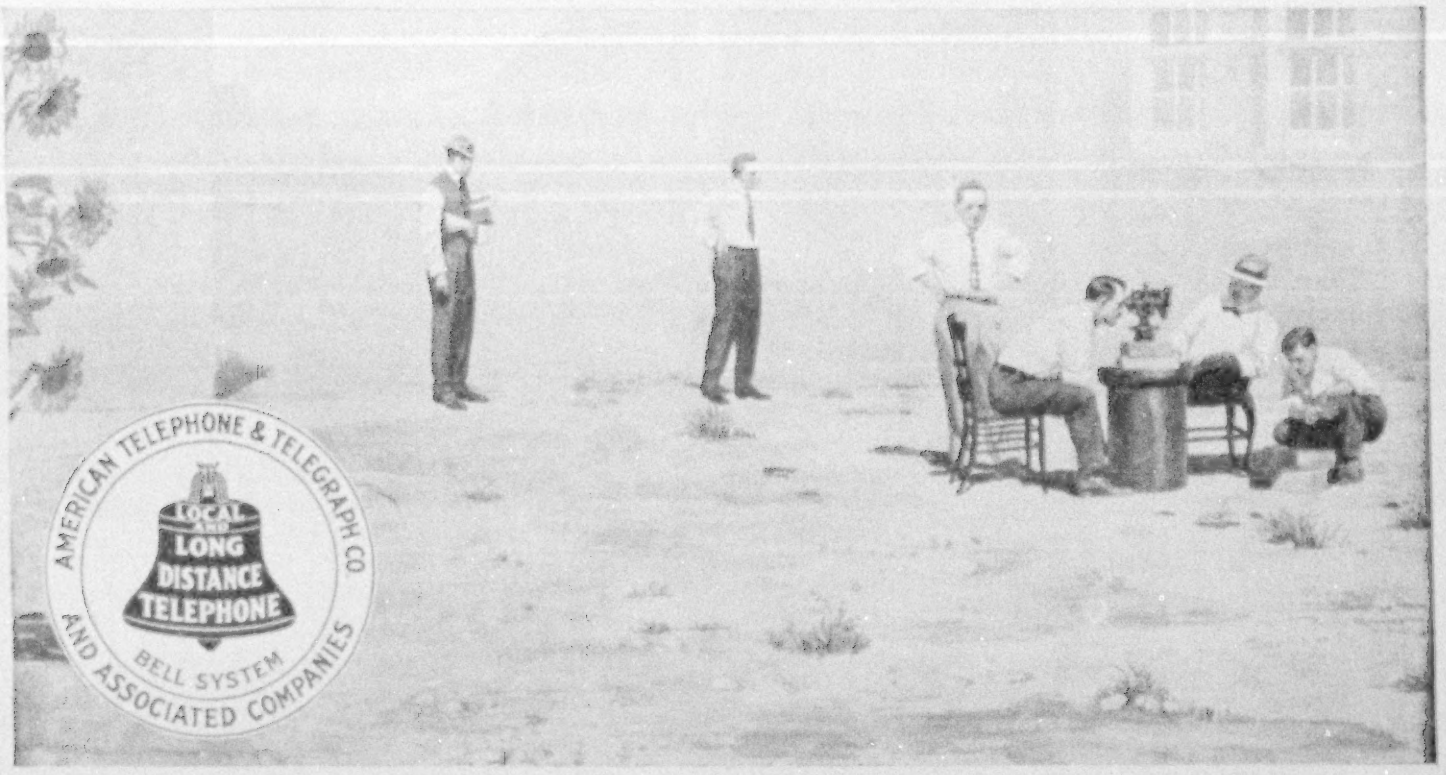

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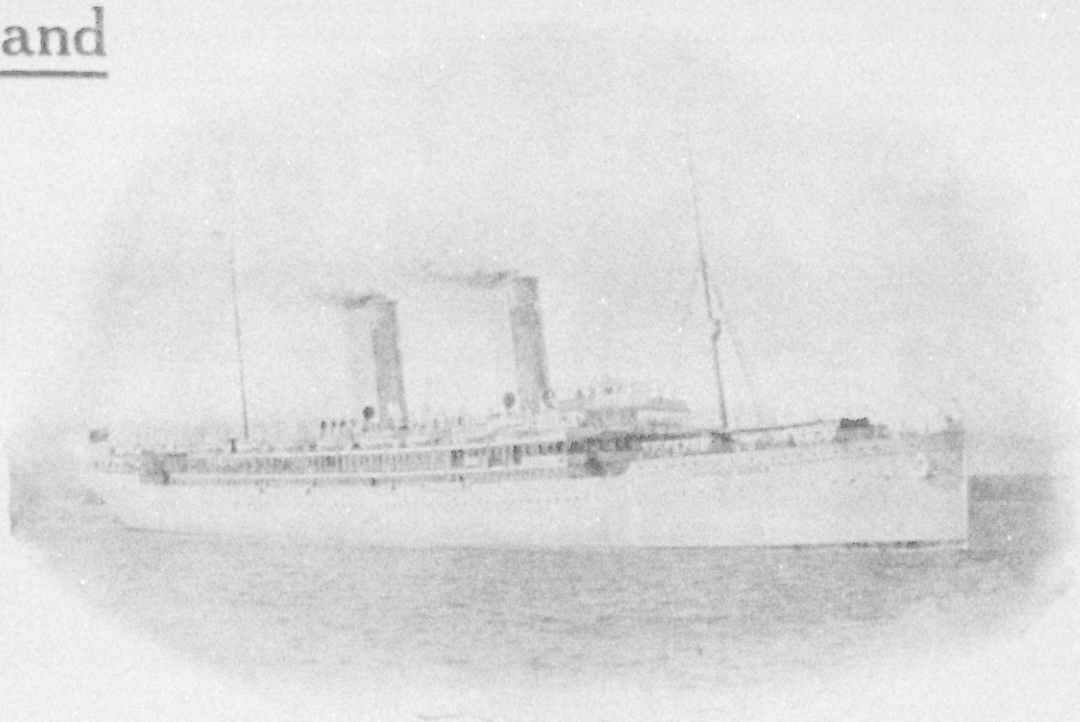

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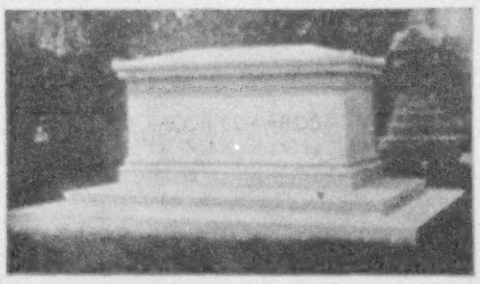

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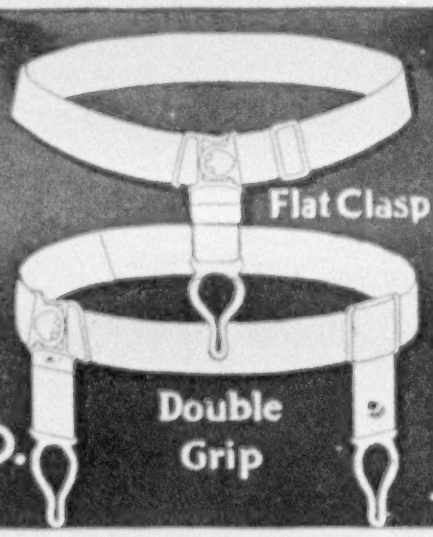

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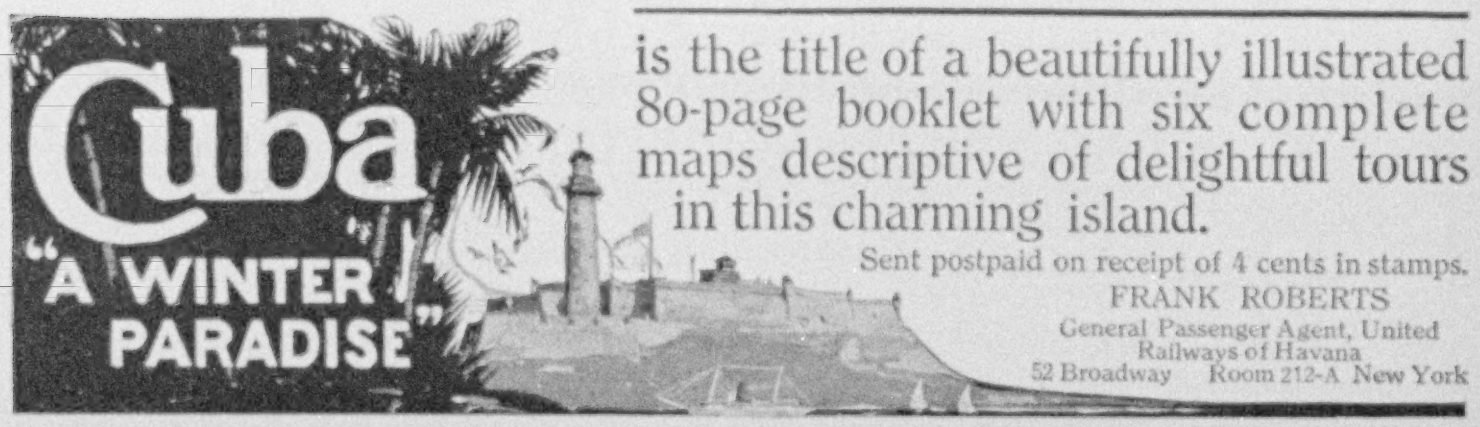

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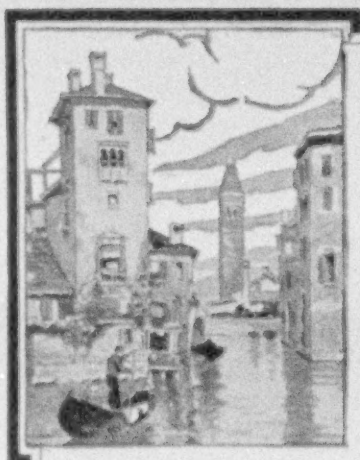

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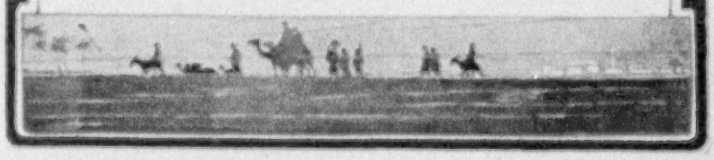

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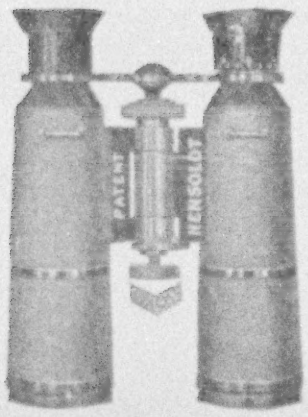

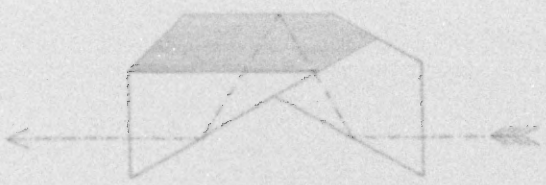

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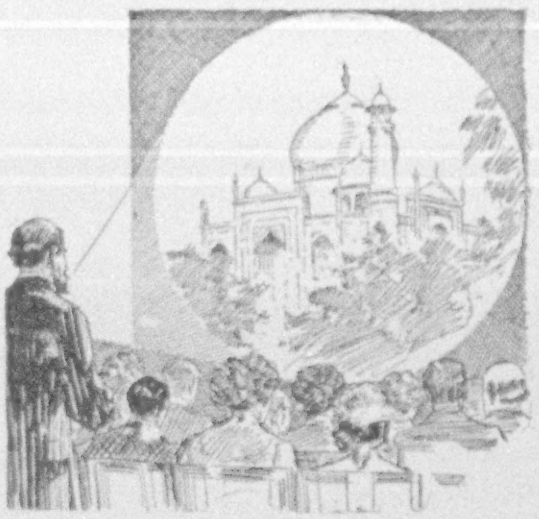

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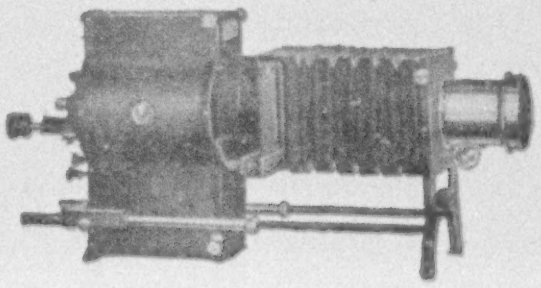

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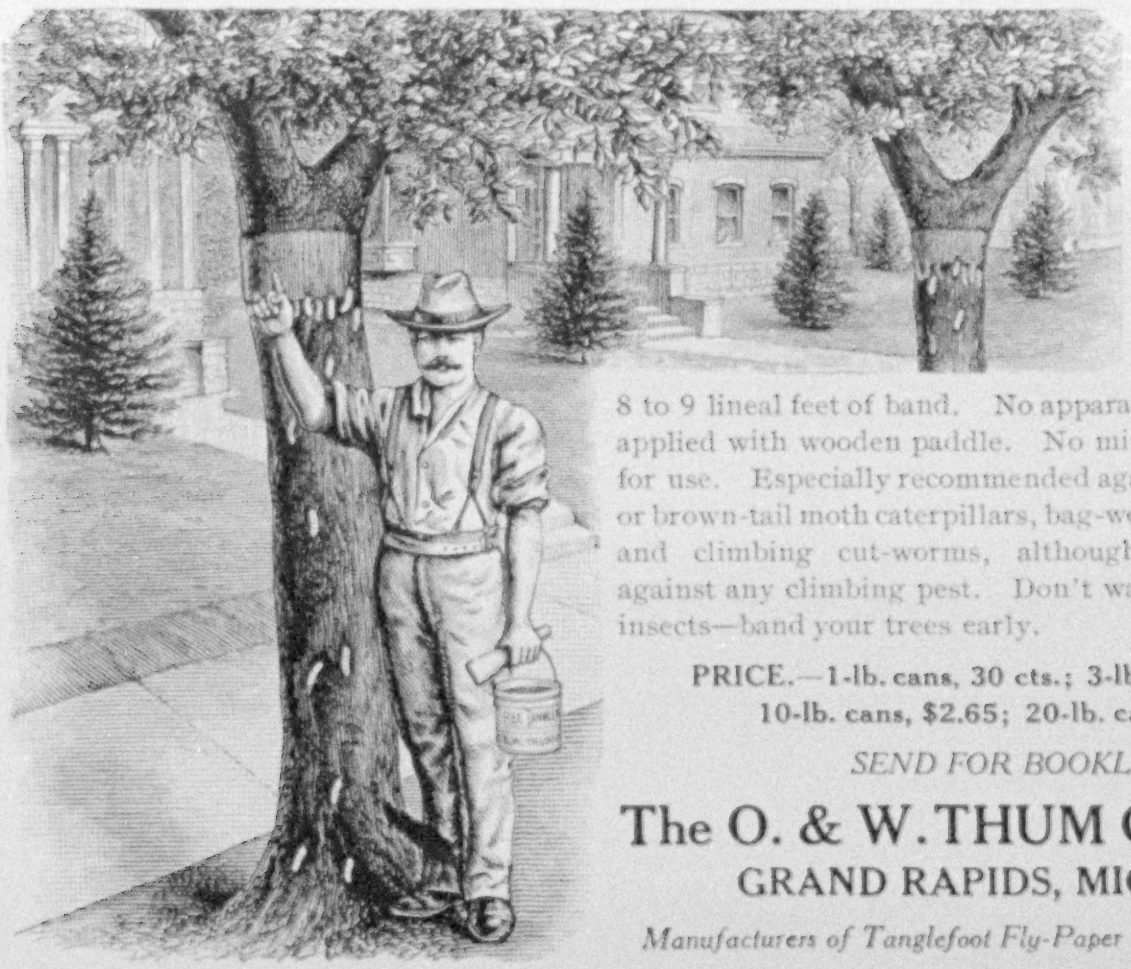

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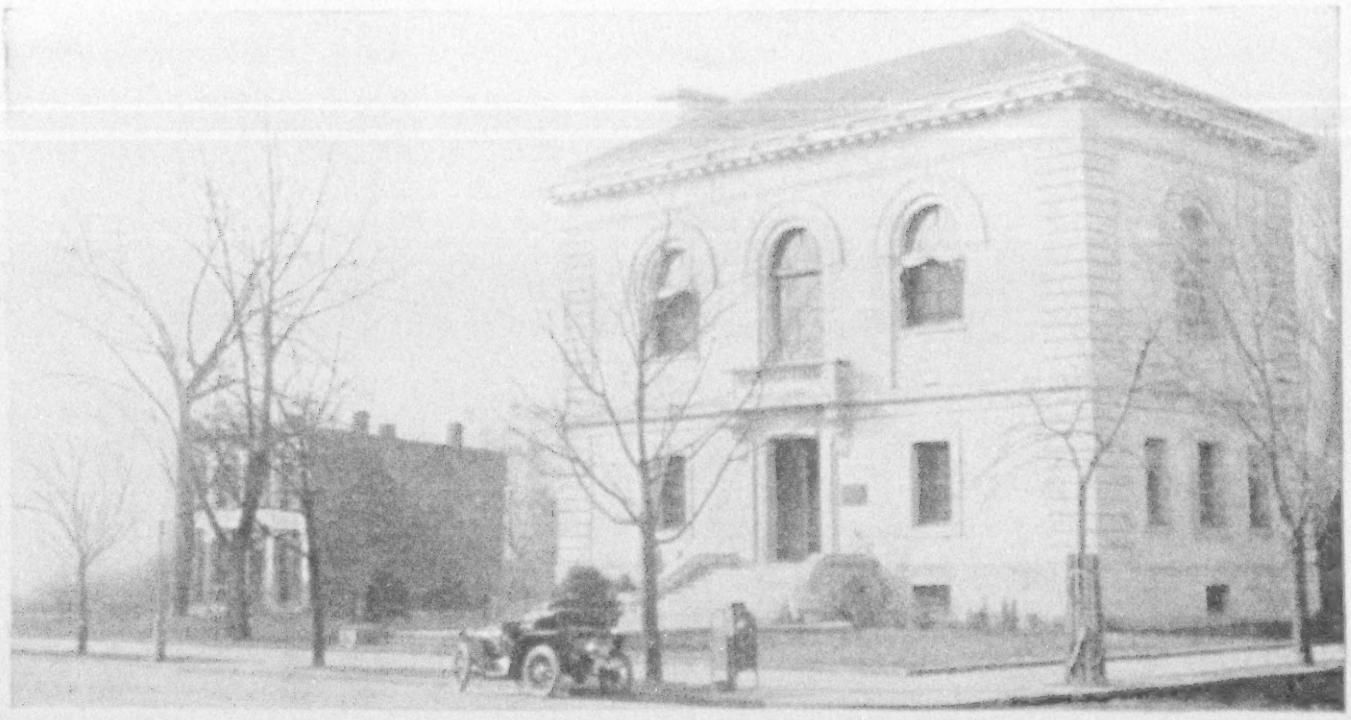

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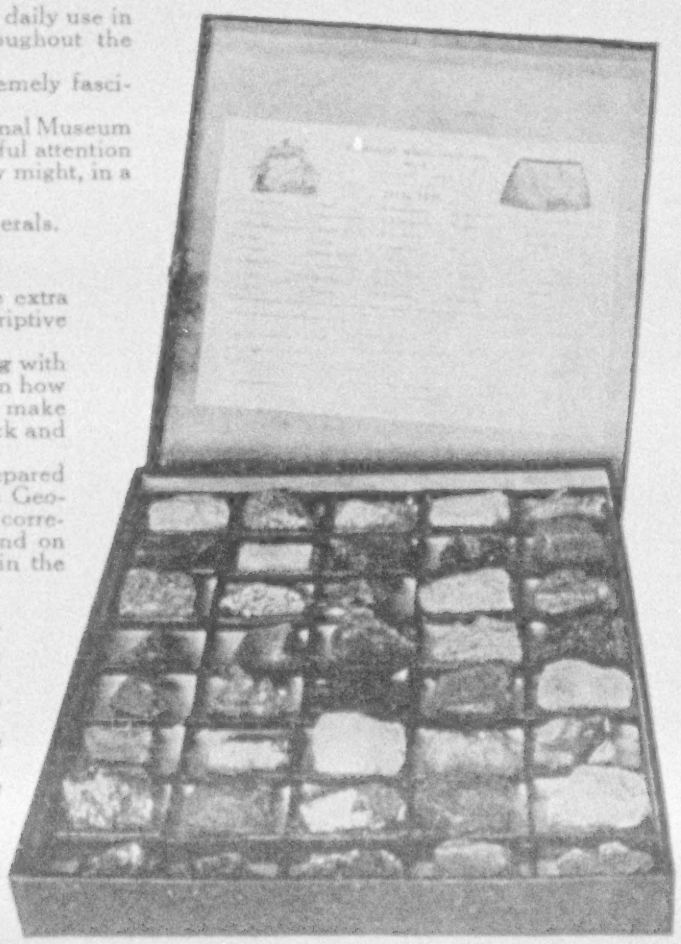

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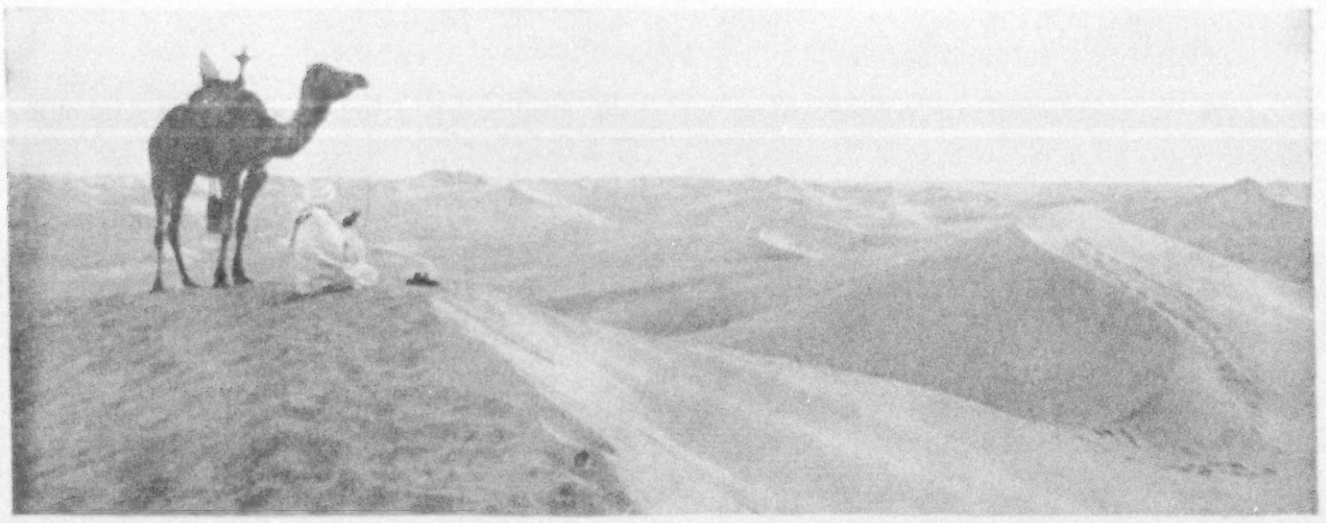

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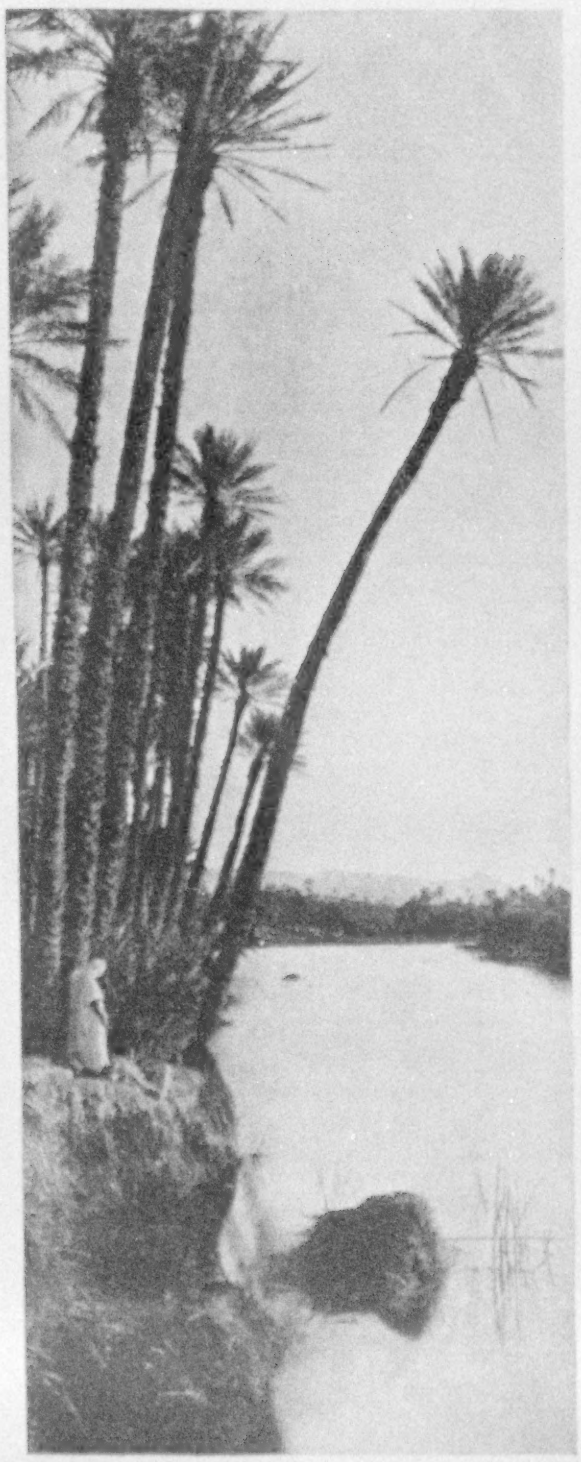

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